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ABSTRACT

This document contains the 12 issues of the newsletter "The Link" published during 1999-2001. "The Link" disseminates resources, recent educational research findings, and other information of interest to practitioners in the four states served by AEL, Inc.: Virginia, West Virginia, Kentucky, and Tennessee. Feature articles cover such topics as enabling change, learning in the preschool years, equity in education, consolidated planning by school districts, a regional perspective on charter schools, 21st-century community learning centers, parent and community involvement, informal science, technology in the classroom, formative evaluation of comprehensive school reform, teacher collaboration for professional development, research on comprehensive school reform, AEL's Institute for the Advancement of Emerging Technologies in Education, a synopsis of recent school improvement efforts, and connecting school and community through technology. Issues also include research notes, grant opportunities, new resources from AEL, descriptions of publications of interest, and announcements of trainings and other professional development events. (SV)

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The Link: A Publication for Education Practitioners.

AEL, Inc.

V18-20 1999-2001

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The Link

Vol. 18, No. 1 • Spring 1999

Linking the knowledge from research with the wisdom from practice to improve teaching and learning

SCHOOL IMPROVEMENT
Enabling Change, p. 1
A New Start for "Pilot" County, p. 3
Managing Change, p. 4

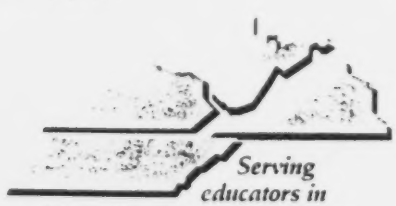
OFF TO A GOOD START
Learning Starts Before School Begins, p. 5
Building Excitement About Learning, p. 6
A Moral Imperative to Share, p. 7

RESEARCH NOTES
A Look at State Reading Standards: Why Cross Boundaries?; Students Need Health and Work Skills; School Improvement via the Web, p. 9

AEL PUBLICATIONS
Help! They Don't Speak English Starter Kit; Curriculum Reform: What State Officials Say Works; Spanish Language Briefs for Parents. Order Form/Insert

ANNOUNCEMENTS AND INFORMATION
Professional Development Events, p. 10-11
EDPubs On-line Ordering System; ASCD Education Bulletin, p.11.

NEW PUBLICATIONS OF INTEREST
Achieving Your Vision of Professional Development: Essential Knowledge: The Debate Over What American Students Should Know, p. 12



Serving educators in Kentucky, Tennessee, Virginia, and West Virginia since 1966

Enabling Change

By Nancy Balow, AEL Staff Writer

Local school improvement efforts must balance the good of the few with the good of the many. Actions that benefit one group of students may be of no help or even detrimental to others. Views that seem true to one camp (*we must prepare students for a rapidly changing world*) can oppose views held by another camp (*the old ways have worked and will continue to work*). In advocating for the people or views they know best, some may find it hard to see the forest for the trees.

When an improvement or reform effort gets under way, often the biggest issue will be change and how to deal with it. Humans naturally resist change, which can create problems when trying to reach agreement about the need for change.

SCHOOL IMPROVEMENT

Lessons Learned About Change

AEL researchers have been studying school improvement since 1966; our experience has taught us some basic lessons about meaningful and lasting efforts.

- Improvement requires change, and change can require people to give something up—including a safe spot within their own comfort zone. Recognizing what's being sacrificed and helping its owner(s) deal with the loss is crucial.
- Depending on how it's perceived, change can either drive people further apart or bring them together. If someone resists change, it's good to find out why. Maybe there's a good reason.
- Change needs the support of leadership, preferably at both the school and district levels.
- Change efforts must be relevant to local needs.
- Change must extend beyond the school building to the whole community. Unless educators, parents, and other community members share a vision that incorporates education into their future, change efforts can fizzle or go off course.
- Change takes time. Some people will get on board immediately; others will resist for quite a while. Leaders must be prepared for the chaos that will sometimes seem to prevail.

Blazing a Trail

Education researchers tend to look at schools as parts of a whole. We see value in creating an environment that nurtures the growth of all inhabitants rather than selectively supporting a few.

The Comprehensive School Reform Demonstration program, also referred to as the Obey-Porter initiative after the Congressmen who sponsored the legislation, reflects this view of education. It specifies nine criteria that schoolwide reform efforts must meet if schools are to receive program funding. Included among them are requirements that the effort must be research-based and demonstrate evidence of effectiveness and that parents, if not the whole community, must be actively involved.

These requirements leave a lot of room for applying different specific strategies so schools may customize programs to fit their local needs. To accomplish

(continued on page 2)

School Improvement

(continued from page 1)

the Obey-Porter goal of making reform efforts succeed in more schools, we need trail guides to get us through the forest.

AEL invited staff from the region's state departments of education to join with us and with developers of schoolwide reform programs to think about how to create such a guide. This group agreed that leadership for reform belongs at the local level and that an effective implementation process should ease the way for settling differences while enabling members of all groups to identify their roles and build on their strengths.

These conversations with state departments of education, along with the national focus on comprehensive school reform and AEL's 32 years of experience, outlined a school improvement framework that AEL is refining and pilot testing in a small, rural community. The nucleus of this framework incorporates four major elements: community engagement, curriculum design/professional development, external facilitation, and formative evaluation (see box on page 3). Each of these elements shows promise of effectiveness by itself or in combination with other strategies. Implementing them in concert will be the key to helping high-needs schools achieve continuous improvement.

AEL's evolving school improvement framework includes four main elements: community engagement, curriculum design/professional development, external facilitation, and formative evaluation.

- **Community Engagement**

Research and experience suggest that schools enjoy greater success when they're fully integrated with and supported by their larger communities. Children are more likely to arrive at kindergarten ready for school when they have positive, stimulating experiences in home and day care settings. Students have more meaningful experiences in civics, career planning, or community service when community agencies and businesses become active in their local schools. Schools can better prepare students for work when employers communicate with administrators and teachers. And parents can better understand how to support their children's learning when schools communicate with the community. The Rural Center at AEL contributes some of its extensive knowledge of community engagement to this program.

- **Curriculum Design/Professional Development**

AEL is developing a two-year process—Teaching and Learning Mapping Strategy—that incorporates both curriculum design and professional development. Teachers learn how to use student data to reveal the effectiveness of classroom instruction. They learn how to look at the curriculum vertically and horizontally across the school to see where their teaching and assessment match—or miss—the state's standards and tests. They describe classroom activities that illustrate how they teach and explain how they assess student mastery of standards. The strategy supports mapping of all content simultaneously, thus enabling teachers to identify potential areas for integration and reinforcement of learning across the curriculum.

A key component of the Teaching and Learning Mapping Strategy is an external facilitator who meets with teachers and administrators in workshop sessions and serves as a guide and mentor. The external facilitator works closely with a district facilitator and school site leaders to ensure consistency, progress, and commitment.

- **External Support**

External support is provided by an external facilitator, the person (or persons) who steps back and looks at the big picture of where the school is and where it needs to be going. The facilitator helps school staff build skills so they can use research-based knowledge to make decisions, can assess and evaluate school change, can identify and address problems, and can create collaborative relationships among school and community members. The facilitator works as a guide and mentor to help school and district staff ensure that new strategies work together to improve performance.

(continued on page 3)

Implementing Schoolwide Programs

The U.S. Department of Education just published *Implementing Schoolwide Programs: An Idea Book on Planning.* Available free both on-line and from the publications office, the book includes an overview of the schoolwide planning process, step-by-step discussion on planning for change, information about high-quality technical assistance, advice on sustaining programs through accountability and continuous improvement, and resources to support implementation.

There are three ways to obtain the publication: call the department's publications office at 877-4-ED-PUBS, use the on-line ordering site at http://www.ed.gov/pubs/edpubs.html, or print out a copy at http://www.ed.gov/pubs/Idea_Planning.

(continued from page 2)

In June, AEL's External Facilitators Academy will begin training its first group of facilitators in the region. Many of these individuals will begin working with schools this fall. Over a two-year period, their training and work as school facilitators will contribute to successful implementation of reform programs at their assigned schools. Their observations will inform a formative evaluation process and regional research study that AEL is conducting in partership with the Center for Research in Educational Policy at the University of Memphis (see "Not Tested on Animals" in *The Link*, Vol. 17, No. 4).

- **Formative Evaluation**

Frequent, well-designed progress checks can mean the difference between success and failure of an improvement plan. AEL and the center have pooled complementary skills to develop materials and processes to conduct yearly formative evaluations specific to schoolwide reform. Researchers will help schools set implementation benchmarks, then will annually interview and survey teachers, students, and parents. They'll look at test scores and observe classroom activities and school events. This ongoing data collection process will be assisted by external facilitators and will provide information for annual reports, including recommendations which school leaders can use to plan the next stage of implementation.

In addition to site-specific evaluation services, the staff of AEL and the Memphis center will convene a series of evaluation forums open to all schools. As school staff learn about the techniques for and uses of formative evaluation, they will build local and district capacity to better evaluate school performance. ■

A New Start for "Pilot" County

When the request for help came from state school officials last year, AEL staff were nearly ready to test elements of a new schoolwide reform program. The match was made, and the test began last fall.

Rural "Pilot" County school district is very isolated, has a meager tax base, and had experienced a long history of low performance on state tests. It recently emerged from a period of poor leadership, leaving it under close state scrutiny in probationary status.

New school leadership, supported by AEL's external facilitation and the state department of education, has helped classrooms, schools, and community involvement change for the better. AEL strategies are all directed at building knowledge and skills within the county so that improvement will continue after AEL departs.

Work began simultaneously in the community and in the schools. AEL staff helped school and local government officials convene strategic planning meetings with community members. Participants at these meetings have developed a vision statement that expresses their hopes for providing outstanding schools, creating new jobs, and preserving the area's cultural heritage—all of which should contribute to building a community their children will want to live in rather than leave.

Community members are applying this vision for the future to various areas of concern—education, culture, health care, industry, natural resources, adult education, and vocational education—so they can pay attention to maintaining and/or improving each.

In the schools, equally careful attention is being paid to issues of instruction, curriculum, and assessment through the application of AEL's Teaching and Learning Mapping Strategy. Training will take two years and give teachers a practical, user-friendly way to help students achieve at higher levels. When introduced to the strategy, teachers were pleased. "We can do this," they said.

Although the strategy can eventually lead to curriculum reform, "it doesn't ask teachers to make immediate, drastic changes," says AEL codeveloper Becky Burns. "It assists schools and districts in three ways. First, by aligning curriculum, instruction, and assessment with state standards and test objectives. Second, by increasing understanding of results-oriented teaching. And third, by improving teacher communication across and between grade levels and courses."

Assisting with implementation is AEL facilitator Joy Runyan. She'll work with "Pilot" County teachers and administrators during the two years it takes to get the strategy fully implemented. As she helps the district facilitator and school site leaders gain a working understanding of the strategy, Runyan will also assist with workshops and professional development activities for teachers.

"I'm a mentor," Runyan explains. "Teachers don't always have time to study something new. They can't sit back and look at how its pieces fit into what's already happening in the classroom, but that's what I'm supposed to do. Between what I see and what teachers tell me, we make the transition as smooth as possible."

Also smoothing the way to improvement will be formative evaluations of the county's innovations. As AEL staff help county and school leaders set benchmarks, they will make plans to measure the district's progress. Test scores, school and classroom observations, and surveys of teachers, students, and parents will all contribute to decisions about what happens in the future.

Managing Change

"Just imagine how long it takes to move 3,000 kids six times a day," says Pam Brown, principal of Woodbridge Senior High School in Virginia's Prince William County School District. "On a traditional 55-minute class schedule, we had maybe 40 minutes of actual class time. Making time for quality instruction was a big factor in changing over to block scheduling three years ago."

Woodbridge and district staff believe in working toward continuous improvement and try to stay on the cutting edge of education thinking. That's why Brown decided to join AEL's Quest project.

Quest schools work individually and as a network to build learning communities that include teachers, administrators, parents, and students. Assisted by a listserv, visits to one another's schools, and rallies that bring network members together, Quest school teams and their AEL facilitators employ various strategies to help them become more effective learners. AEL's Quest staff members also belong to the School Change Collaborative project of the regional lab network, which is examining the benefits of learning communities and developing improvement and evaluation processes.

To give Woodbridge's new schedule a fair test, Brown and staff committed to block scheduling for four years, with the intention of doing formative evaluation along the way. Last summer they began by surveying students and teachers. The school has since conducted focus groups with students. In December the evaluation process continued with the use of a school self-study tool called Data in a Day. (See AEL's Web site, http://www.ael.org/rel/quest/dataday.htm, for a complete description.)

This excerpt comes from a letter written by parents of a Woodbridge student to the editor of the Potomac News *in Woodbridge, Virginia.*

> We were recently participants of a 48-member team, consisting of staff, faculty, parents, and students, that did an evaluation of the 4-x 4 curriculum. Over a two-day period, this evaluation team examined previous survey data, observed 48 classes, and listened to very candid faculty, parent and student focus groups. . . .
>
> We would like to commend Pam Brown, principal of WSHS, for her initiative and courage to conduct such an innovative, introspective evaluation. With total Woodbridge community involvement, teamwork, and commitment to continued evaluation of the educational process, Woodbridge Senior High will remain on the leading edge of educational excellence.
>
> We urge all parents to become involved in their children's school. A wonderful experience is waiting for you right in your own backyard!

Brown credits Quest and the processes it promotes for helping her school understand and manage change. "Our Quest team is very active. After the first rally, we had parents come back and do things like put up signs to make the campus more user-friendly. Now they understand that school climate can be just as important as academics. The students have used Quest processes in student government to help them recognize and address issues such as diversity. They've created organizations for groups that were being left out before Quest. It's given them a foundation and tools to help them function as part of the school community.

"Quest introduced us to Data in a Day, which is so good at giving a quick snapshot of what's happening right now in teaching and learning. I don't know anything that does it better. One of its greatest benefits is getting all segments of the population thoroughly involved and focused on student achievement. We had 48 parents, students, and teachers acting as our researchers. We started one afternoon and finished the next, and it was interesting to watch the transformation in the parents over those two days. At the end they realized that they were really being heard and becoming part of the process."

Brown believes that sense of involvement and ownership means just as much as the data that were collected. "Whatever decision we make about the future of block scheduling, it won't be unilateral; everyone in the community will have a voice. Let me tell you, it's a scary thing to open up your building and say 'Come on in' to people you don't see every day, but we can't truly learn together unless we create a shared understanding. That understanding will help us communicate and arrive at agreement about change."

For information about the effectiveness of block scheduling in Virginia high schools, see "Block Scheduling Can Enhance School Climate" by Thomas L. Shortt and Yvonne V. Thayer in the December 1998-January 1999 issue of Educational Leadership. ■

Off to a Good Start

Children have the best chance of benefitting from school when adults in the community share responsibility for preparing them for it. This means helping ensure that children's health and nutrition needs are met; that parents have the support and training they may need to be effective as their children's first teachers, and that children have access to high-quality and developmentally appropriate preschool programs. These principles lie at the heart of National Education Goal One: By the year 2000, all children in America will start school ready to learn.

Partnerships among schools, businesses, service providers, and other organizations have moved many communities closer to making this first goal a reality during the ten years since the nation's governors and President George Bush established the National Education Goals. Various efforts have focused on five critical dimensions of children's growth: physical well-being and development, social and emotional development, approaches to learning, language usage, and cognition and knowledge.

Local innovation, coupled with education research, offers hope for addressing these five interrelated dimensions so that children start school ready to learn. If you're inspired by the ideas presented below and the stories that follow, visit the National Education Goals Web page at http://www.negp.gov for in-depth reports on early childhood education efforts and a community action toolkit.

Learning Starts Before School Begins

By Suzie Boss, Northwest Regional Educational Laboratory

Ask young children when "real school" begins and they'll typically say, "Kindergarten." But according to researchers, children start learning the complex skills they'll need to become competent readers and writers long before they take their first baby steps.

Learning to Read and Write: A Place to Start, by Rebecca Novick of the Child and Family Program at Northwest Regional Educational Laboratory (NWREL), synthesizes current literacy research to guide educational practices for the preschool and primary grades. Although the book highlights studies in fields ranging from linguistics to child development to neuroscience, the style is accessible, with colorful classroom examples and suggested activities used to illustrate key concepts.

The book begins with an in-depth look at the preschool years, when babies and toddlers acquire oral language skills in the context of relationships. "Sensitive, responsive, loving care is all that infants need to grow and thrive," the author reports. Parents and other caregivers can nurture what researchers call "emergent literacy" by providing opportunities and encouragement for children to speak, hear, read, write, view, think, and explore. Far from being passive learners, infants actively respond to stimuli and are "profoundly social," Novick points out.

Researchers understand language development to be an innate, natural process. In a passage about baby talk, for example, Novick shows that parents' instincts for how to communicate with their babies—using short, repetitive utterances and a singsong delivery; exaggerating facial expressions; exchanging "coos" or smiles—dovetail with infants' attraction to stimulation and need for emotional connection. As toddlers begin uttering solitary words, then putting phrases together, parents and caregivers are wise to avoid correcting grammar. Instead, the author describes how adults can "provide, expand, and idealize language."

Parents and caregivers can nurture "emergent literacy" by providing opportunities and encouragement.

Reinforcing the basic concept that "reading is language," Novick points to three key areas in which teachers and parents can optimize literacy development during the preschool years:

- Oral language development, nurtured through activities such as conversation, pretend play, and storytelling
- Print awareness, enhanced by immersing preschoolers in a print-rich environment
- Phonemic awareness (an "ear" for the separate sounds in words), encouraged through reading nursery rhymes, singing songs, and engaging in language play

How do children navigate the transition from oral language to written language—from being speakers to being readers and writers? A chapter devoted to the primary years highlights the major research insights into the reading process and translates them into useful strategies and practices teachers can incorporate in the classroom. "Speaking, listening, reading, and writing are all aspects of literacy," the author notes, "and develop in an interdependent manner."

This interdependence among literacy skills is reinforced throughout the book. When reading and writing are taught together, for example, "the benefits are greater than when they are taught separately," Novick reports. Similarly, more complex tasks—fol-

(continued on page 8)

Building Excitement About Learning

When Monday morning rolls around, young children in Covington, Kentucky, embrace the new week enthusiastically. They look forward to reading, singing, and playing with their teachers, who treat the children like family. Youngsters also enjoy studying theater, writing, quilting, or other arts with an artist-in-residence.

Diane Roketenetz directs the James E. Biggs Early Childhood Education Center. With a staff of 27 lead, assistant, special ed, and home-based teachers and about 100 parents, the center helps 370 youngsters get off to a good start in school.

The 3- and 4-year-olds who participate in the Biggs Center programs develop an excitement about learning that gives them a measurable boost when they reach elementary school. And their families, who may spend nearly as much time at the center as their children do, become learners and teachers themselves.

Roketenetz credits parents with much of the center's success. "By breaking down the walls that were keeping families away, we've achieved high levels of participation. We offer drop-in child care and let parents ride the school buses with their children. Every year we train about 100 parents in how to read to their children, how to promote language development, and how to have fun with learning. The parents receive a small stipend for time they spend helping in the classroom, and they take their new skills home with them."

Four-year-olds spend mornings or afternoons at the center every Monday to Thursday. Fridays they stay home for visits from the teachers, who demonstrate ways to turn everyday activities and simple games into learning experiences. They bring baskets filled with books and other materials, some of which help with developing parenting skills.

Three-year-olds travel to the center only on Fridays and receive visits at home on other days.

Plenty of other activities make it easy for working parents to be part of center life. Events such as Dad's Nights routinely draw large numbers of fathers and grandfathers, and whole families enjoy events such as Biggs Bingo, which culminate in celebrations attended by as many as 500 community members.

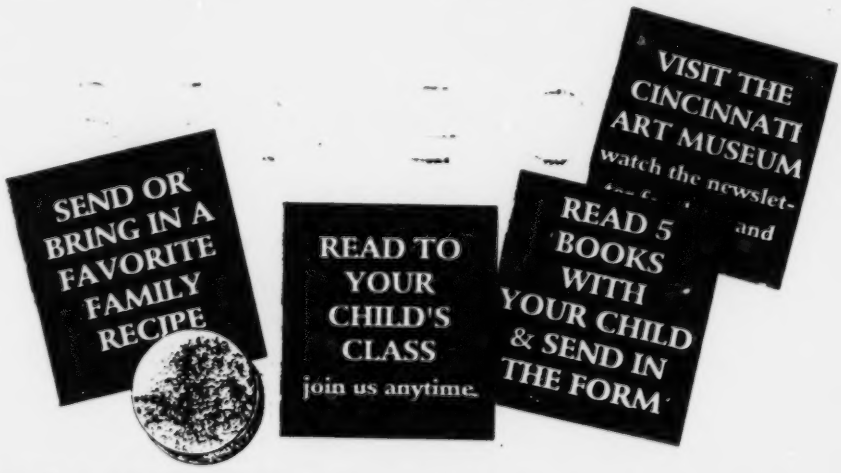
Seventy percent of Covington families meet federal free lunch guidelines, which would cause many educators to label these youngsters as "at-risk." Roketenetz resists, preferring to call her students "at-potential," saying "they're perfectly capable of learning, they just need the opportunity."

Before 1990, Covington had only a Saturday program for preschool children. When the Kentucky Education Reform Act (KERA) passed, the Covington Independent School Board committed wholeheartedly to its early intervention policies. The board remodeled an abandoned building into a warm, welcoming environment for families. In addition to eight preschool classrooms, the center houses a family resource center, which offers career programs, GED classes, and life skills training to adults.

The center offers a series of 12 Parent Power classes that give parents insight into how the school system operates and how to become advocates for their children. Other classes involve parents' attendance at school board and site-based council meetings, followed by informal discussions of the experience.

While the Biggs Center has won awards and recognition from local, state, and national education groups, Roketenetz takes most satisfaction from the community response. "We've been able to make these great gains because our families come and work side by side with us. The center really belongs to the community."

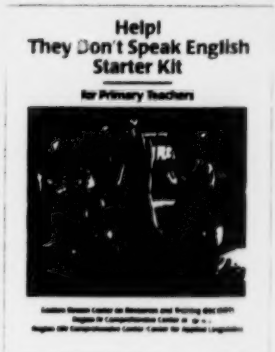
For more information, contact the Biggs Early Childhood Center, 1124 Scott Street, Covington, KY 41011, phone 606-292-5895. ■


SEND OR BRING IN A FAVORITE FAMILY RECIPE
READ TO YOUR CHILD'S CLASS
join us anytime.
READ 5 BOOKS WITH YOUR CHILD & SEND IN THE FORM
VISIT THE CINCINNATI ART MUSEUM
watch the newslet-
and

Biggs Bingo and similar programs last several weeks and involve whole families. These pieces of a bingo board show some of the activities adults and children can enjoy. When the program period ends, everyone brings the completed boards to a celebration that includes food and prizes.

NEW AEL PRODUCTS

Classroom Help! with Limited English Proficient Students



The first *Help! They Don't Speak English Starter Kit* was produced in 1989 by a task force of Virginia migrant educators in response to requests from classroom teachers for information about and assistance with their limited-English-proficient (LEP) students. The *Help! Kit* has proved to be an excellent source of recommended teaching strategies, lesson plans, and materials.

This new edition was prepared by the Region IV Comprehensive Center at AEL in cooperation with Eastern Stream Center on Resources and Training and the Center for Applied Linguistics at the Region XIV Comprehensive Center. It retains the manual's original focus of providing help to busy primary teachers who want practical advice on how to more effectively include, instruct, and nurture LEP students. It is important to emphasize that most of the strategies promoted here are recommended strategies for *all* students, not just LEP students.

The *Help! Kit* reminds us that "limited English proficient" does *not* mean "limited Thinking proficient"!

The *Help! Kit* is designed to

- provide mainstream teachers with teaching strategies and materials that benefit all students—particularly LEP students
- provide cultural information to help teachers better appreciate language-minority students and their families
- introduce strategies to improve the reading and writing abilities of LEP students
- introduce strategies that combine learning basic math skills with language development activities
- offer suggestions for encouraging language minority parents to play an active role in their children's education
- propose alternative methods to monitor the progress of and evaluate LEP students
- provide a wealth of resources and references teachers can use

The ninth and final chapter of the *Help! Kit* contains selected, in-depth articles that will help teachers pursue relevant topics. This 206-page book is free from Eastern Stream Center on Resources and Training, Bugbee Hall, Room 305, Oneonta, NY 13820, phone 800-451-8058.

What Works in Curriculum Reform?

A group of researchers from the nation's 10 regional educational laboratories asked that question of more than 100 individuals—including legislators, state school board members, state education department staff, and members of education associations. The researchers wanted to know about the history and progress of curriculum reform in the states, and also were looking for lessons learned and unresolved issues.

This first phase of a multiyear project has collected practical advice that policymakers and school leaders can use to plan and implement the next steps for improving school effectiveness. For example, researchers found that successful reform efforts share some characteristics.

- They use standards-aligned assessment and accountability systems to direct technical assistance and intervention to foundering schools and districts.
- They focus on improving instruction at the local level by involving teachers in professional development and standards-review activities.
- They include all communities (business, education, and public) in the development and regular review of standards.
- They view reform as an ongoing effort and continually look to improve aspects that work and eliminate those that do not.

The issues brief *Curriculum Reform: What State Officials Say Works* comes from the Lab Network Project on Curriculum, Learning, and Instruction and can be found on the Web at http://www.ael.org/rel/schlserv/curric.htm. For those unable to access or download the on-line version, a limited number of printed copies is available. Contact Jane Hange at AEL by e-mail, hangej@ael.org, or by phone, 800-624-9120.

From the ERIC Clearinghouse on Rural Education and Small Schools (ERIC/CRESS)

New Spanish Language Briefs for Parents

The latest installment in this series of brief articles for parents was written by Alicia Salinas Sosa of the University of Texas at San Antonio. This set of six articles was developed especially for Latino parents. In plain language the articles explain what researchers and practitioners have learned about ways parents can help their children do well in school. Educators and community organizations can use the articles in a variety of ways: as newsletter or report card inserts, as handouts at PTA or PTO meetings, as flyers in public waiting rooms (doctors' offices, health departments, or training centers in schools), or as orientation materials for parents of incoming students. English translations are available.

The 1999 set includes these titles:

- Respect, Responsibility and Resourcefulness: Three Rs for Success
- Adolescence: The Last Step Before Becoming an Adult
- Being Bicultural and Bilingual Can Lead to School Success—Here's Why
- Reading Children's Books: There's More to it Than Meets the Eye
- Understanding the Goals of Preschool Education
- Hispanic Parents Support their Daughters' Success

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See inside for ordering information.

RESOURCES AVAILABLE FROM AEL

Some documents can be downloaded from our Web site: http://www.ael.org

___ **A Guide to Gender Fair Education in Science and Mathematics (1998)**

This publication presents information gathered from the research and programs developed by hundreds of teachers and researchers in the field of educational equity. The activities highlighted are examples of programs supported by the U.S. Department of Education and National Science Foundation, as well as states, counties, and cities. It includes an annotated bibliography of programs for girls in grades K-12. $15; 40 pp.

___ **Briefs for Parents**

These sets of six articles are ready to cut and paste into your newsletter, newspaper, or periodical. Clearly and briefly, each article addresses a child development or education topic of concern to parents. They are available free (limit one copy of each set per order). To order, check the set(s) you wish to receive. Free.

___ Brief articles for a general audience of parents (English only)

___ Spanish language brief articles for parents (with English translations) 1999 edition, by Alicia Sosa

___ **EdTalk: What We Know about Reading Teaching and Learning (1996)**

This publication identifies the latest knowledge in reading education. It also suggests special approaches to teaching minority, disabled, and limited-English-proficient students and offers ways to involve parents and the community in students' reading development. Other areas covered include basal readers, strategic reading, technology's role in reading instruction, professional development for reading teachers, and reading's relationship to other language arts and general subjects. $5; 70 pp.

___ **Expanding the Vision: New Roles for Educational Service Agencies (1998)**

Educational service agencies can serve an essential role today to rural districts as they face the challenges of systemic school reform, according to E. Robert Stephens in this book from AEL's Rural Center. Stephens details the forces that are shaping current expectations of rural public education and lays the groundwork for considering future possibilities for agency programs and services. $18; 172 pp.

___ **Family Connections Parent Notebook**

The *Family Connections* learning guides are now offered in a notebook for parents. The colorful learning guides are available in three volumes: *Family Connections 1* is for families of preschool children. *Relaciones Familiares 1* is the Spanish-language version, and *Family Connections 2* is for parents with kindergarten children. Each notebook contains a set of 30 four-page guides, plus tips for using them. Each guide includes a **message** to parents, one or more **read-aloud** selections, and fun **activities** for parents and children. $12.95 each ($9.95 without 3-ring binder).

___ **Graphing Calculators in Mathematics Grades 7—12: A Resource Guide for the Classroom and for Preservice/Inservice Training (1998)**

This resource guide—developed by the Center of Excellence for Science and Mathematics Education (CESME) and published by the Eisenhower Regional Consortium for Mathematics and Science Education at AEL—offers a series of lessons covering a wide variety of mathematical concepts and topics. Planned for teachers with no experience with graphing calculators and for those who have used the instruments since their inception, these lessons emphasize hands-on, problem-solving approaches, with connections to science and the real world. $39; 250 pp.

___ **In Accord with Nature (1998)**

In Accord with Nature demonstrates how educators and youth leaders can help middle-school-age and higher level students understand and define their relationship to nature and learn the importance of protecting the environment. Alternative teaching strategies and structured activities will connect students with the natural and the built worlds. $19; 192 pp., (ISBN 1-880785-20-X). Also by Knapp:

___ *Just Beyond the Classroom: Community Adventures for Interdisciplinary Learning* (1996). $12; 108 pp. (ISBN 1-880785-15-3)

___ *Lasting Lessons: A Teacher's Guide to Reflecting on Experience* (1992). $12; 117pp. (ISBN 1-800785-06-4)

___ **K-8: Building Blocks of Algebra (1998)**

Recent research about the human brain supports what teachers have long observed: students learn by fitting new information together with what they already know. *K-8 Building Blocks for Algebra: Patterns, Functions, Relationships* provides K-8 teachers with activities that help develop a child's ability to think logically, form generalizations, and predict future events. Patterns, functions, and relationships bring the real world into the mathematics classroom and help children make sense of the relationships between numbers. $18; 108 pp.

___ **Making Schools Work for Every Child (CD-ROM, 1998)**

This collection of math and science materials helps teachers and administrators acknowledge children's diverse strengths, identify inequities, and improve the ways educators serve students with varied needs. The Eisenhower National Clearinghouse, co-developer of the CD-ROM, maintains a Web site of the disk's contents: http://equity.enc.org. **Free.** Limited number available.

___ **1997 Native Education Directory: Organizations and Resources**

This directory includes information about national and international nongovernment organizations related to Native education: federal departments and agencies; congressional committees; periodicals; tribal college and university programs for Native language instruction and preservation, Native studies, and Native student support services; and expanded state listings. $12; 108 pp.; soft cover (ISBN 1-880785-17-X)

___ **Notes from the Field: Evolution of the Primary Program in Six Kentucky Schools. Vol. 6, No. 1 (1998)**

In this issue, researchers examine the development of the primary program in six rural Kentucky elementary schools, which they studied for eight years. This report is based on the entirety of the research, but the most detailed description comes from the 1996-97 school year, when researchers narrowed the focus of their work to the class of 2006. These students were in their final year of the primary program during 1996-97. $2; 12 pp. plus 8-page supplement.

___ **Planning Schools to Serve Rural Communities (1998)**

This resource from AEL's Rural Center discusses the character of a good rural community school and briefly considers the relationships among learning, community, and facility construction in rural areas. **Free**; 8 pp.

___ **Preventing Antisocial Behavior in Disabled and At-Risk Students (1996)**

This issue of *Policy Briefs* focuses on children with ADHD and learning disabilities, presents a model that promotes prosocial behavior, and suggests considerations for preventive practice and policy making. $2; 12 pp.

Recruiting and Training Volunteer Tutors of Emergent and Beginning Readers in the Primary Grades (1998)

This manual identifies characteristics of effective tutoring programs, suggests ways to recruit tutors and select the students they'll work with, presents a model for conducting tutor training sessions, and provides activities tutors can use to help emergent and beginning readers. Colorful activity cards guide tutors through reading, comprehension, word study, and writing activities. In addition, the activities are demonstrated on the trainer's video, which is divided into two 45-minute sessions.

___ Trainer's package (includes 90-minute video, 64-page manual, and 15 activity cards). $225. Product number D98-009-L173.

___ Tutor's package (includes 64-page manual and 15 activity cards). $30. Product number D98-010-L173.

___ **Rural Education Directory: Organizations and Resources (1996)**

This directory includes information about national organizations, federal government programs, state organizations, state department of education rural program coordinators, state data centers, and rural journals. $6; 65 pp.

___ **School-Based Programs to Promote Safety and Civility (1998)**

Schools are adopting antiviolence programs that, until recently, hadn't been studied for effectiveness. Now, several rigorous studies provide information to help schools and policymakers select methods that may work for them. This issue of *Policy Briefs* looks at these studies and reviews the programs found to be most effective. The publication focuses on more than 20 primary and secondary level programs, all of which get a thumbs-up from researchers. Complete contact information is provided for each program. $2; 12 pp.

___ **Schools for Disruptive Students: A Questionable Alternative? (1998)**

Recent safe-schools legislation and commitments to provide orderly, safe learning environments have prompted states to create alternative schools for disruptive students. This issue of *Policy Briefs* reviews the research on alternative schools and suggests indicators policymakers can monitor to judge the effectiveness of alternative school legislation. $2; 8 pp.

___ **The ABC's of Parent Involvement (1998)**

The ABC's of Parent Involvement in Education: Preparing Your Child for a Lifetime of Success offers information, inspiration, ideas, and expert advice to parents with children of all ages. During the book's creation, AEL's Family Connections staff contributed early childhood knowledge. 134 pp. Individual copies are $3.00, and a box of 50 costs $65.00, including shipping. To order, contact Linda Santrock by phone at 800-624-9120 or by e-mail at santrocl@ael.org.

AEL Information (free)

❑ AEL Products & Publications Catalog-temporarily out of stock. See our Web site (http:www.ael.org) or call for information.

❑ Sample *Family Connections 1* and 2—take-home learning guides for young children

❑ Interdisciplinary Teamed Instruction—annual institutes that help school teams plan integrated courses, units, and lessons

❑ Quest—a process to help schools along the improvement journey

❑ QUILT—Questioning and Understanding to Improve Learning and Thinking—a nationally validated, research-based professional development program

Information Search Packages

These information packages contain a variety of current resources and are excellent references for educators, policymakers, and the public. Included are reprints of articles from journals, newsletters, and periodicals; ERIC Digests; an ERIC search; and information about AEL-produced materials and other resources.

___ Block Scheduling (1996) $15; 142 pp.

___ Promoting Safe Schools (1996) $15; 178 pp.

___ Technology in Education (1998) $15; 136 pp.

Theme Issues of The Link

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12

A Moral Imperative to Share

"You could say it was serendipity—teacher Amy Brillhart saw a mom, who was obviously a day care provider, dragging an assortment of six kids with her and wondered, 'How can we reach the people who take care of our babies?'"

That's how Jamie Chapman, former director of the Virginia Beach Education Association, describes the genesis of the Ready to Learn Kit. At their 1996 Summit for Children, teachers in the Virginia Education Association committed to the development of an early childhood education program. Believing that parental involvement in children's education, from birth through high school, is the factor most likely to help children succeed, they started with the tried-and-true parenting workshop.

"We created workshops that were great for 16 people, but we knew there were lots more parents of preschoolers out there. In fact, approximately 30,000 children younger than age 5 live in Virginia Beach, so about 6,000 enter kindergarten each year, and many simply aren't ready. In 1997-98, 20 percent of the children were so far behind that they qualified for a remedial program in kindergarten. Fortunately, when Amy saw that home day care provider, the light went on."

Jamie Chapman

Julie Cheatwood of the Rainbow Room Pre-school gets help from Logan Randolph, Connor Gannucci, and Jenna Corey as she opens February's Ready to Learn Kit.

Chapman, Brillhart, and other teachers brainstormed an idea to build partnerships between schools, home day care providers, and parents for the purpose of giving infants, toddlers, and preschool children opportunities to participate in developmentally appropriate activities. Through the Virginia Beach City Public Schools they recruited four elementary schools into the project, then asked for their help in identifying local home-based day care providers.

Next, working with child development experts from Tidewater Community College and Old Dominion University, and leaders from the National Association for the Education of Young Children, the team added two high school teachers and their child care occupation students at the Virginia Beach Technical and Career Center.

Special education teachers and their students in the vocational education program at Princess Anne High School came on board, as did fourth and fifth graders from the elementary schools. Together, these groups form the Ready to Learn Teams and Partnerships that make the program work.

The program is elegant in its simplicity. The child care students at the career center design materials for a kit that contains a month's worth of activities for youngsters and parents. The kits are produced by the special education students at the high school, then delivered to the elementary schools for students who live near the day care providers to carry home on school buses and deliver. As parents bring their children to and from day care, they borrow videos and learn about activities they can continue at home. Recently the providers also began using AEL's *Family Connections I Parent Notebooks*.

The project is small but growing—the original nine providers and four el-

(continued on page 8)

Preventing Reading Difficulties

National Research Council

A 1998 report, *Preventing Reading Difficulties in Young Children,* states that 40% of American fourth graders failed to read at a basic level in a 1994 national assessment. The report calls for an end to the "reading wars" and for specific actions, from early childhood through elementary school, to boost reading achievement.

The report, and activities related to literacy, can be found at the U.S. Department of Education Web site, http://www.ed.gov/inits/readingsummit. To order a print copy of the report call 800-624-6242. For free publications and videos on child literacy, call 877-4-ED-PUBS.

Learning Starts

(continued from page 5)

lowing a complicated plot or argument, or expressing ideas in writing—call for the very reasoning skills that children hone by listening to stories and engaging in dramatic play.

"The five-year-old who makes up her own stories, invents new rhymes, writes pretend messages, discusses books that have been read to her, sings complex songs, and reads a book she has memorized is demonstrating that she has a great deal of knowledge about reading and writing," Novick says.

Learning to Read and Write doesn't shy away from the hard questions about literacy: Why do some children fail to acquire reading skills in the primary grades? What causes some young readers to hit a slump around the fourth grade? What puts children from poor families more at risk of school failure? Novick delivers answers grounded in research and buttressed with examples from the real world.

The book includes profiles of five schools that demonstrate "innovative and culturally responsive educational practices." In these engaging site profiles, creative teachers bring research concepts alive in their classrooms, demonstrating the author's intent to tie theory with practice.

The book concludes with materials to use in workshops for parents and teachers. Handout topics range from the benefits of story reading to the latest news in brain development.

Reprinted courtesy of NWREL, this story originally appeared in the January-February 1999 issue of Northwest Report. ■

To order a copy of *Learning to Read and Write: A Place to Start*, contact NWREL's Document Reproduction Service, 101 S.W. Main Street, Suite 500, Portland, OR 97204-3297. Telephone 503-275-9519 or e-mail products@nwrel.org. The 202-page softcover book costs $20.00, shipping included.

Assessing Readiness

According to the first of the six National Education Goals (1991), "all children in America will start school ready to learn." What assessments are available for teachers to use in evaluating children's readiness for kindergarten? How valid are they for different instructional and policy purposes?

In a new paper, Samuel J. Meisels of the Center for the Improvement of Early Reading Achievement addresses various meanings of the term "readiness" and the methods that have been devised to assess children's learning at the outset of formal schooling. Meisels identifies four interpretations of "readiness," which each suggest a different approach to teaching young children and assessing their learning.

A copy of CIERA Report #3-002, *Assessing Readiness*, is available on-line at http://www.ciera.org. A printed copy costs $6.50, shipping included, and may be ordered from CIERA/University of Michigan, 610 E. University Ave., Rm. 1600 SEB, Ann Arbor, MI 48109-1259.

A Moral Imperative

(continued from page 7)

elementary schools have increased to 20 providers and seven schools—and Chapman expects more growth as new funding becomes available. "We started with a minigrant from the Virginia Education Association. We estimate the total cost to be $20 per preschool child per year, for which we're getting huge returns.

"Our child care occupation students know they're creating activities that will be used by real people, not in some theoretical situation. Their studies about early childhood brain and language development have true immediacy. When they learn about the 'best practices' of parental interaction, they know they'll be applying what they learn to creating videotapes and printed materials for actual use. That matters."

The special education students get similar satisfaction from making and assembling the kits. Elementary students enjoy being responsible for delivery, and their parents like building stronger relationships with neighbors.

There's a strong public policy aspect as well, Chapman believes. "Given what we now know about the importance of early childhood experiences, public educators have a moral imperative to share this information with parents. Time could be running out on public education funding unless we get smart and work on things we really know can make a difference."

Although the Ready to Learn Kit program began in an urban setting, Chapman expects to replicate it in the more rural peninsula area to which he recently moved. For more information, contact Jamie Chapman at Colonial UniServ Unit. Phone 757-867-7331 or e-mail jamiec0202@aol.com. ■

AEL's ***Family Connections*** learning guides have been used by kindergarten and Head Start programs for several years and remain popular across the country. Each guide includes fun activities requiring ordinary household materials as well as reading selections and more. The *Parent Notebook* makes these guides available to everyone. See order form/insert for price and ordering information.

Research Notes

The U.S. Department of Education's Office of Educational Research and Information funds research through regional laboratories, national centers, and field studies. The following are summaries of recent reports. Information on finding the complete text includes a Web address (for downloading) as well as contact information for obtaining printed copies.

A Look at State Reading Standards

From the Center for the Improvement of Early Reading Achievement

How do state language arts standards influence the way teachers teach and, ultimately, what and how children learn?

To begin the task of evaluating the impact of state standards on American students, researchers compared the structure and information of state language arts standards, focusing on the 14 state documents that provided benchmarks or objectives by grade level for grades K-3.

Analysis of the documents led to several recommendations, including the following.

- The organization of state standards and benchmark documents should conceptualize reading in a manner that is simple enough to support manageable systems of curriculum, instruction, assessment, and reporting, but not so simple that important areas of emphasis are overlooked.
- The content of early reading/language arts standards and benchmarks should derive from information based on current research conducted from a variety of perspectives.
- State standards should invite conversation about what students should be able to do.

The criteria used for this analysis should be useful to districts in evaluating their state standards for early reading/language arts.

Karen K. Wixson and Elizabeth Dutro, *Standards for Primary-Grade Reading: An Analysis of State Frameworks,* CIERA Report No. 3-001. Download at http://www.ciera.org or mail to CIERA/University of Michigan. 610 E. University Ave., 1600 SEB, Ann Arbor, MI 48109-1259. Print version costs $6.50, shipping included.

Why Cross Boundaries?

From the Center on English Learning and Achievement

This paper describes the arguments made for using interdisciplinary approaches in school curricula. *The Logic of Interdisciplinary Studies* reviews the historical antecedents, looks at how interdisciplinary studies are organized, and looks for answers to several questions. Are there differences across content areas? What general assumptions about teaching and learning are made? And how are interdisciplinary studies presumed to improve upon traditional approaches to school curriculum?

The authors don't attempt to examine the empirical evidence about whether or not interdisciplinary studies 'work,' as little research of this sort exists. The focus here is on frameworks, justifications, and reasons that may be built in part on empirical evidence but also on assumptions about teaching and learning.

Sandra Mathison and Melissa Freeman, 1998. *The Logic of Interdisciplinary Studies,* Report Series 2.33 (11004). Go to http://cela.albany.edu/logic/logic/html or mail to CELA at University at Albany, School of Education, ED-B9, 1400 Washington Ave., Albany, NY 12222.

Students Need Health and Work Skills

From the Mid-continent Regional Educational Laboratory

Americans consistently rated health information and work skills high on the list of content areas that "definitely" should be included in a kindergarten through 12th grade curriculum, according to a new study by McREL. Language arts, technology, and mathematics rounded out the top five rated areas.

Results from a national survey conducted by the Gallup Organization are featured in the report *What Americans Believe Students Should Know: A Survey of U.S. Adults.* The survey asked American adults to rate the importance of over 250 academic standards from multiple content areas.

The survey items were created from McREL's nationally recognized database of content standards, *Content Knowledge: A Compendium of Standards and Benchmarks for K-12 Education (2nd ed)* (http://www.mcrel.org/standards-benchmarks). The work-related competencies were derived from documents that represent opinions of employers.

The questionnaire used in the survey was designed so that states or local school districts can replicate this study in their communities to determine what knowledge educators, the general public, or other key groups believe is important for students to master. The survey questionnaire is included in the on-line version of the full report.

Print and on-line versions of both the executive summary and full report are available. Go to http://www.mcrel.org/survey/summary.asp or www.mcrel.org/survey/index.asp. For print versions, phone 303-337-0990 or e-mail info@mcrel.org.

School Improvement via the Web

From the North Central Regional Educational Laboratory

In an attempt to make research more accessible to the education community, the North Central Regional Educational Laboratory (NCREL) has developed a research-based Web

(continued on page 10)

(continued from page 9)

site on school improvement issues. The Pathways to School Improvement site is primarily designed to provide school improvement teams with the most up-to-date research-based information on school reform for use in designing individual school improvement plans. NCREL researchers have organized the material in an easy-to-use format. For example, when you visit the site, you begin by identifying a critical issue. Each issue has eight components.

1. Issue: Concisely states the issue or the problem
2. Overview: Discusses the issue and why it is critical for schools to consider it
3. Goals: Lists goals developed from research and best practice
4. Action Options: Identifies strategies teachers, administrators, parents, and the community can implement
5. Implementation Pitfalls: Alerts user to problems frequently encountered
6. Different Points of View: Acknowledges and outlines alternative points of view related to the critical issue
7. Illustrative Cases: Describes experiences in real schools
8. Contacts: Explains how to get in touch with agencies that help school teams

In addition, the resources are set up so that the teams may develop a "customized school improvement profile" that can be used to check their progress.

Pathways to School Improvement is at www.ncrel.org/pathways.htm.

Guidebooks, Reports, and Sample Assessments

From the Center for Research on Evaluation, Standards, and Student Testing

This center's Web site provides a wealth of tools for administrators and teachers. Guidebooks to assist with implementing assessment reform practices include one titled *Portfolios and High Technology Guidebook*. It addresses the use of portfolios and provides practical advice on defining standards, content guidelines, and scoring criteria to make sense of the portfolio process.

Reports cover many aspects of assessment and include several from studies done in Kentucky. Among these is *Writing Whirligigs: The Art and Assessment of Writing in Kentucky State Reform*. It follows one exemplary seventh-grade Kentucky teacher as he teaches the art of writing while simultaneously addressing the demands of the state evaluation.

Under "What's New," look for *Sample Performance Tasks*, a collection of tools the center prepared for the Los Angeles Unified School District that can be easily adapted for use elsewhere.

All of the above, and much more, can be downloaded at http://www.cse.ucla.edu. For information about print versions, contact CRESST/UCLA, 301 GSE&IS, Box 951522, Los Angeles, CA 90095-1522, phone 310-206-1532. ■

Announcements and Information

Professional Development for Practitioners

Only one in five teachers feels "very well prepared" to work in a modern classroom, according to a recent report from the National Center for Education Statistics (NCES). One reason, Secretary of Education Richard Riley notes, is that many teachers have inadequate opportunities for professional development. AEL has planned several activities for educators to build their skills; we hope to see you at one. Visit the Training and Conferences page of our Web site (http://www.ael.org/training.htm) for more information.

Equity Conference 1999: Mathematics, Science, and Technology for ALL Children

May 6-8, Nashville, TN

Sponsored by the Eisenhower Regional Consortium for Mathematics and Science Education and the Region IV Comprehensive Center at AEL, with support from the Virginia Space Grant Consortium, this conference will emphasize gender equity, multiculturalism, and students with special needs. The conference will address the latest research about equity issues, classroom practices, and resources for implementing equity strategies in schools. Keynote speakers include David Sadker, author of *Failing at Fairness: How Our Schools Cheat Girls*, and Dr. Vinetta Jones, Executive Director of EQUITY 2000.

Teachers, administrators, guidance counselors, school-to-work educators, higher education faculty, preservice teachers, and anyone interested in mathematics, science, and technology education will enjoy this conference.

Register early, as space is limited. Through April 1, registration is $65, thereafter the fee goes up to $75.

For more information, visit our Web site or contact April Noble by e-mail (noblea@ael.org) or phone 800-624-9120.

Effective Questioning to Increase Student Achievement: QUILT Training for Trainers

June 20-25, Lexington, KY

QUILT—Questioning and Understanding to Improve Learning and Thinking—helps schools restructure their classrooms to make the learning environment more active, student-

(continued on page 11)

(continued from page 10)

centered, constructivist, inquiry-based, and metacognitive. Designed to increase student learning by improving teachers' classroom questioning techniques, QUILT complements and supports many staff development and school reform programs.

This training-of-trainers helps districts prepare cadres of teachers who can train others in the schools, districts, and states. Typically, a local school team (two teachers and an administrator) attends the training. QUILT has been successfully implemented in elementary, middle, and high schools.

The QUILT program

- is nationally validated, certified by the U.S. Department of Education's Program Effectiveness Panel as a "program that works"
- has a successful track record in more than 200 schools since 1991
- is research-based, incorporating practices and techniques linked to higher levels of student achievement

Registration costs $675 per person. For more information, visit our Web site or contact Sandra Orletsky or Beth Sattes by e-mail (orletsks@ ael.org, sattesb@ael.org) or phone 800-624-9120.

Special for Kentucky schools: The Kentucky Department of Education has grants available to help nine schools send teams to 1999 QUILT training. For more information, contact Shirley Keene by e-mail (keenes@ael.org) or phone 800-624-9120.

Interdisciplinary Teamed Instruction: 1999 Summer Institutes

June 21-25, Salt Lake City, UT
July 12-16, Lexington, KY

This school reform strategy builds collaboration and promotes integration across the school curriculum. It enables teacher teams, students, administrators, and community members to weave standards, curriculum, instruction, and assessment into a relevant, rich tapestry of learning experiences.

Each team leaves the weeklong Institute with these tools:

- a plan for implementing interdisciplinary teamed instruction
- a team-developed integrated unit
- specific instructional practices such as project-based learning, teaching to multiple intelligences, and community-based learning
- strategies for developing alternative assessments, performance criteria, and scoring rubrics
- resources for effective teamwork, community-building, and networking

Registration fee of $450 per person will be accepted until June 1. Teams of six or more receive a 10% discount. *Special to Kentucky educators:* The Kentucky Department of Education has scholarships available for the Lexington institute. Visit our Web site for more details, or contact Rebecca Burns at AEL by e-mail (burnsr@ael.org) or phone 800-624-9120.

SEIR•TEC Leaders Academy

July 20-23, Moneta, VA

The effective use of educational technology depends on a number of factors, including the need for a shared vision of technology's role, training, technical support, access, and time. Most important may be the support provided by a skilled administrator. This three-day academy will help education leaders develop their skills.

School or district teams are encouraged to attend this event, presented by AEL and SEIR•TEC.

Participants will explore three strands related to technology in education. *Leadership in Technology* will build capacity to create shared vision and develop a climate conducive to change. *Technology for Leadership* will provide knowledge and skills about key areas of technology. *Voices From the Field* will present lessons learned from educators who have earned recognition for their use of educational technology.

Registration is free, but space is limited and applications must be received by April 30. For an application or more information, visit our Web site or contact Marcie Altice by phone, 540-483-5289, or e-mail, maltice@frco.k12.va.us.

Inquiry Into Improvement: Quest for SMART Learners

July 26-27, Gatlinburg, TN

SMART stands for successful, motivated, autonomous, responsible, and thoughtful—all characteristics that can apply to teachers, administrators, and parents as well as students. All are invited to this symposium to discuss and learn more about authentic teaching, alternative assessment, motivation, and more. Presentations will include student-led conferences and a sharing of Quest schools' experiences.

For more information, visit our Web site or contact Beth Sattes or Shirley Keene by e-mail (sattesb@ael.org or keenes@ael.org) or phone 800-624-9120.

The EDPubs On-Line Ordering System

http://www.ed.gov/pubs/edpubs.html

This new system will help you identify and order U.S. Department of Education products. It offers search options to help you find specific products or arrange to borrow copies of videotapes.

ASCD Education Bulletin

This free, biweekly, on-line newsletter from the Association for Supervision and Curriculum Development includes short items of interest to people who care about K-12 education (including early childhood). It covers such topics as curriculum, instruction, assessment, technology, equity, diversity, and maintaining strong support for public schools.

To subscribe, send an e-mail message to listserv@listserv.ascd.org (leave the subject line blank). Your message should say "subscribe bulletin," but don't use the quotation marks. ■

New Publications of Interest

Professional Development "How-To's"

The SouthEastern Regional Vision for Education (SERVE) has developed a "how-to" resource that assembles the current research on professional development and change for educators looking to accelerate their professional growth and to improve student learning. Researchers review the stages of building an effective professional development system and offer a framework for change:

- Develop a vision of effective professional development that takes into consideration such factors as the concept of change and adoption of new strategies.
- Examine the concept of schools as learning communities where all members—teachers, parents, students, administrators, support staff—learn with and from each other.
- Plan for professional development, using a process that includes the four major components of content, objectives, activities, and evaluation.
- Consider the investments necessary in creating and implementing a successful program, particularly such issues as finding time and developing external partnerships.
- Explore promising forms of continual assistance, such as peer coaching and a robust form of collaboration called joint work.
- Develop a plan for assessing and monitoring the progress of professional development programs.

To order *Achieving Your Vision of Professional Development: How to Assess Your Needs and Get What You Want* by David Collins, contact SERVE at 1-800-352-6001 or go to http://www.serve.org. The 169-page book costs $10. Named 1998 Book of the Year by the National Staff Development Council.

Defining What's Important

The Mid-continent Regional Educational Laboratory (McREL) has just published *Essential Knowledge: The Debate Over What American Students Should Know* by Robert J. Marzano and John S. Kendall, with Barbara B. Gaddy. McREL's examination of the core knowledge every American student should master explores such questions as How should essential knowledge be identified? Is there enough time to teach essential knowledge? What are Americans' views on essential knowledge? (This question is partly answered by McREL's recent research—see "Students Need Health and Work Skills" on page 9.) The book also looks at the powerful relationship between academic standards and vocabulary.

To order, contact McREL by phone at 303-651-2829 or fax 303-776-5934 or go to http://www.mcrel.org/products/essentialknowledge.asp. Cost is $39.95 plus $4.00 shipping.

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AEL is a private, nonprofit corporation. AEL serves as the regional educational laboratory for Kentucky, Tennessee, Virginia, and West Virginia. For these same four states, it operates both a Regional Technology in Education Consortium and the Eisenhower Regional Consortium for Mathematics and Science Education. In addition, it serves as the Region IV Comprehensive Center and operates the ERIC Clearinghouse on Rural Education and Small Schools. AEL's primary source of funding is the Office of Educational Research and Improvement (OERI), U.S. Department of Education. This publication is produced with funds from OERI contract number RJ96006001. The contents herein do not necessarily reflect AEL or OERI policies or views.

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The Link

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AEL

Linking the knowledge from research with the wisdom from practice to improve teaching and learning

EQUITY IN EDUCATION
Equity: A Principle With a Promise, p. 1
Resources for Classroom Teachers, p. 2

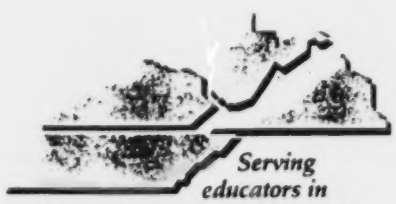
LINKING RESOURCES AND GOALS
Taking the Mystery Out of Local Consolidated Planning, p. 4
Needs Assessment: A Vital Part of the Planning Process, p. 5

NEW AEL PRODUCTS
Next Steps in Indian Education; Free ERIC Digests; Video Journal Introduces QUILT Program; Documentary Describes AEL Project in Southern West Virginia, p. 6

PUBLICATIONS OF INTEREST
Strategies for Science Professional Development; A Magazine for Classroom Innovators; Mathematics Professional Development; Other ENC Publications, p. 8

ANNOUNCEMENTS AND INFORMATION
Professional Development Events, p. 9

TECHNOLOGY IN THE CLASSROOM
Technology in the Schools: Can We Make It Work?, p. 10
Milken Exchange Looks at Technology in West Virginia Schools, p. 12



Serving educators in Kentucky, Tennessee, Virginia, and West Virginia since 1966

Equity: A Principle With a Promise

By Nancy Balow, AEL Staff Writer

One of the most principled promises America makes is that of access to a free public education. It's a difficult promise to fulfill when teachers speak English and some students do not, but U.S. law requires school systems to provide access and equity for all students, including those who speak little or no English (*Lau v. Nichols,* 1974).

If you grew up in this country, you've likely heard America described as a "melting pot." Depending on where in America you lived, however, you may have been either confused by the description or surrounded by evidence of its truth.

In urban areas with a history of immigration, school districts tend to have a good understanding of legal requirements and knowledge of immigrant students' needs. Rural areas, which only recently began to attract foreign-born immigrants, may not be as well prepared to deal with their new populations. Helping schools to meet the needs of limited English proficient students is one goal of the Region IV Comprehensive Center at AEL.

EQUITY IN EDUCATION

Equity Means Helping All Students Succeed

"If students have little or no understanding of English, they won't be served by simply handing them a textbook and saying 'Here you go,'" explains staff member Marvin Rodriguez. "There are systems and methods that can be built in, from the state level down to the classroom, to help students, their families, and the schools succeed. In the past, many rural districts in our region had no reason to give priority or funding to such programs. Now that the immigrant and migrant populations in rural areas are expanding, we're staying very busy helping the schools learn how to serve them better." (See box on page 3 for population figures.)

Rodriguez knows firsthand what it's like to attend school as a foreign language speaker. "My parents moved to New York City from Puerto Rico before I was born, but they never became comfortable with English. In our neighborhood the *bodegas* [grocery stores] were, and still are, the social arena—pockets of discourse where folks could get their news from one another and not need English to get along. My first language was Spanish—I learned English at school, back in the 'sink or swim' days before the law required special services. There were certainly plenty of frustrations for me when I started school."

LEP . . . ESL . . . ELL

This alphabet soup of acronyms describes students who have little or no mastery of the English language. LEP stands for limited English proficient, ESL refers to English as a second language, and ELLs are English language learners.

What Schools Can Do

Rodriguez suggests instructional and assessment practices to help schools support youngsters from families where English is seldom spoken at home. "School districts should have someone who coordinates and delivers services,

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I believe that 10 years ago we had one ESL teacher who covered the whole 21-school district. Each year we'd see a few more schools with immigrant students, and each year a few more students in each school. Today we have a dozen teachers and tutors.

—Peggy Olney

generally an English as a Second Language director or teaching specialist. Every school with limited English proficient students should set aside time for students to work with the specialist. Elementary schools generally have more time designated for language instruction, while high schools may have only an hour a week. To supplement what the specialist does, classroom teachers can use a buddy system—find a student who understands both languages to act as a translator and mentor."

Many teaching techniques for working with limited English proficient students are also used in special education: designing shorter assignments, extending completion times, and using pictures or three-dimensional models to convey words and concepts. Instructional strategies that work for all students while boosting language skills for limited English speakers can make a big difference for teachers who don't have time to prepare separate lessons for groups of students.

Some strategies include total physical response activities, which can range from acting out important classroom behaviors—such as fire drills—to reciting and acting out rhymes as simple as "teddy bear, teddy bear, turn around; teddy bear, teddy bear, touch the ground." Other strategies might be cooperative learning, language experience, dialogue journals, and games. These and more are presented in a recent AEL publication for primary teachers, *Help! They Don't Speak English* (see box above).

As the book points out, limited English proficient students are not limited *thinking* proficient; in time they will become comfortable enough to participate more in class. Meanwhile, working with them and their families to improve literacy will help them adapt more quickly.

AEL's Comp Center has helped with so many things besides what's happening in the classrooms. We needed help with the logistics, such as how to think about staffing and how much time to spend with the kids.

—Peggy Olney

Resources for Classroom Teachers

The *Help! They Don't Speak English Starter Kit*—a new publication from the Region IV Comprehensive Center at AEL in cooperation with the Eastern Stream Center on Resources and Training and the Center for Applied Linguistics at the Region XIV Comprehensive Center—helps busy primary teachers who want practical advice on how to more effectively include, instruct, and nurture limited English proficient students.

The *Help! Kit* presents teaching strategies and materials that benefit all students (particularly LEP students), provides cultural information to help teachers better appreciate language-minority students and their families, introduces strategies to improve the reading and writing abilities of LEP students, introduces math exercises and strategies that combine learning basic math skills with language development activities, and proposes alternative methods to monitor the progress of and evaluate LEP students.

This new edition was prepared from one produced in 1989 by a task force of Virginia migrant educators in response to requests from classroom teachers.

The 206-page book is free from the Eastern Stream Center on Resources and Training, Bugbee Hall, Room 305, Oneonta, NY 13820, phone 800-451-8058.

The Center for Research on Education, Diversity & Excellence at the University of California provides useful research and materials to educators. A recent research brief, *Teaching Language Minority Students in Elementary Schools* (December 1998), explains how to plan, deliver, and assess a content-based lesson that embeds language development objectives. Go to the Center's Web site (http://www.crede.uscs.edu) to download this and other information, or write to CREDE, University of California, College Eight #201, 1156 High Street, Santa Cruz, CA 95064.

I think every one of our teachers has taken something Marvin suggested and made it a part of their classroom teaching. The strategies have been very beneficial.

—Peggy Olney

The Price of Breaking the Promise

What happens when schools don't treat limited English proficient students equitably? The cost to students

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in lost opportunities can be high; many students who don't receive the proper support simply never graduate from high school. Their talents and abilities, unrecognized and undeveloped, can be lost to society. Their lack of education may consign them to the bottom of the socioeconomic heap.

The costs to schools can be daunting, as well: Families or advocacy groups may sue a school or district that doesn't adhere to federal guidelines. If federal intervention is necessary, Rodriguez points out, it can be "very costly, time consuming, and anxiety producing" for the school.

AEL's Comprehensive Center can help state and district administrators fulfill their responsibilities. Meeting state and federal guidelines can help a school avoid big problems and, more important, provide a high-quality education to all students.

Marvin Rodriguez taught for many years before joining AEL. Most recently, he was an ESL teacher in Virginia's Fairfax County. Peggy Olney is ESL Director for Moore County Schools, a district in rural, central North Carolina. ■

Just recently we began to see languages besides Spanish, like Chinese [in our rural district]. We're looking at a whole new challenge of reaching out to students and families. Now, at least, we know more about how to do it.

—Peggy Olney

Migrant and Limited English Proficient Students

Region IV Comprehensive Center

Numbers reflect K-12 public school enrollment only.

Kentucky				
LEP	1989-90	1,334	1996-97	3,194
Migrant	1993-94	17,262	1996-97	22,762
North Carolina				
LEP	1989-90	4,586	1996-97	24,771
Migrant	1993-94	10,103	1996-97	11,710
South Carolina				
LEP	1989-90	n/a	1996-97	3,202
Migrant	1993-94	2,227	1996-97	1,822
Tennessee				
LEP	1989-90	2,829	1996-97	7,223
Migrant	1993-94	391	1996-97	815
Virginia				
LEP	1989-90	n/a	1997-98	24,876*
Migrant	1993-94	1,835	1996-97	1,662
West Virginia				
LEP	1989-90	273	1996-97	3,000**(approx.)
Migrant	1993-94	256	1996-97	208

These figures come from annual surveys filed by state education agencies that receive Title VII funds. Because some state figures were not included for 1996-97, other sources were consulted. Figures designated by an asterisk (*) come from a 1998 report prepared by the National Clearinghouse for Bilingual Education; those designated by two asterisks (**) come from a report prepared by the Center for Equal Opportunity.

The Region IV Comprehensive Center at AEL helps schools realize the goal of the 1994 Improving America's Schools Act—that all children achieve to high standards, particularly those students with special needs. The Center serves Kentucky, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia.

Visit the Center's Web pages (http://www.ael.org/cac) for more information about its services. The Center recommends the following on-line resources for multicultural, equity, and diversity issues.

Northwest Center for Equity and Diversity, located at Edmonds Community College, is a regional resource center promoting gender equity and cultural diversity in education, business, and the community.
http://www.edcc.ctc.edu/nwcenter

Equity Education Online, lists equity resources (organizations, research, tools, materials, reform efforts) on the site of the Washington MESA project, at the University of Washington.
http://www.etdc.wednet.edu/equity/default.html

Escotet International Link/One World, (with side-by-side English/Spanish menus) includes more than 5,000 links to news sources, as well as education, the arts, international studies, libraries, and more.
http://www.fiu.edu/~escotet

ERIC Clearinghouse on Rural Education and Small Schools, delivers information about American Indian and Alaska Natives, Mexican Americans, migrant education, rural education, and small schools.
http://www.ael.org/eric

National Clearinghouse for Bilingual Education, George Washington University, includes technical assistance information, databases, an on-line library, success stories, and more.
http://www.ncbe.gwu.edu

Taking the Mystery Out of Local Consolidated Planning

By Diana Bowman, Former Training & Development Specialist at AEL's Comprehensive Center

Why It's Needed

Since the 1994 reauthorization of the Elementary and Secondary Education Act through the Improving America's Schools Act, school improvement and student achievement literature abounds with themes related to a comprehensive and coordinated approach to education: "all children achieving to high standards," "programs that cut across categorical boundaries," "educating the whole child," and "systemic school improvement." Individual strategies for improving the quality of education programs are giving way to schoolwide reforms designed to improve every aspect of a school's culture.

At the same time, schools are dealing with significant budget cuts, reductions in numbers of administrators and support staff, and reallocation of funds. With increased emphasis on comprehensive reform and the reality of limited resources, meaningful change can occur only if all available resources are focused efficiently to enable all programs to contribute to the achievement of common goals.

Consolidated planning is a way to integrate programs so that resources are maximized and program fragmentation and duplication are minimized. By examining all programs and resources in light of school, district, or state needs and goals, programs can be designed to support initiatives that address these needs and goals in a coordinated fashion.

How It Works at the Local Level

After a comprehensive needs assessment in the Bridgewater school district*, a planning team identified as a priority strengthening its elementary math program. Contributing causes to the students' low performance in math included a kindergarten through second grade math program that was not rigorous or aligned to the higher grades' curriculum. Also, a recent switch in grades three through six—from departmentalized teaching to self-contained teaching—resulted in many teachers being asked to teach math, reading, and science for the first time in a number of years.

The planning team researched strategies and programs that would strengthen the district's math program by focusing on developing and enhancing the teachers' skills. Team members looked into a program called Math All-Stars, a comprehensive approach to improving math. This program would provide ongoing professional development to help teachers implement hands-on, inquiry-based instruction and align their instructional strategies and curriculum across grades kindergarten through six. This program had been implemented in similar districts across the nation and reported good results. When teachers were informed about the program and surveyed for their input, most agreed that they would like to see it implemented at their schools.

* composite (fictitious)

The planning team contacted the program developers and negotiated fees for their services over the next three years. Needless to say, the program was costly. The team began to examine the costs in relation to the district's financial resources. The team identified the following resources that, if combined, would help fund the program: a portion of Title I funds, Title II professional development funds, Title VI funds for innovative strategies, a portion of the district allocation for professional development, and a state department of education allocation for math and science materials. By targeting these funds toward a major need, the district was able to support the implementation of Math All-Stars.

The Choices Involved

Consolidated planning can involve tough choices. When a district decides to target resources to an area of greatest need, programs in other areas will frequently need to be funded by other resources or, perhaps, cut. Because the Bridgewater district's consolidated plan focused professional development funds on math improvement, schools had to find alternative resources for professional development they wanted in multiple intelligences and discipline. Also, because math was identified as a priority area, the greater portion of the state department's allocation for math and science materials was committed to materials for Math All-Stars.

The planning team had involved district and school staff in the needs assessment and identification of priority needs. When the time came for supporting these tough choices, the teachers understood the benefits of focusing resources and were willing to sacrifice to adopt the math program.

Consolidated planning is not easy. It entails a thorough and thoughtful process that involves all stakeholders and coordinates programs and resources to address identified needs. Although funds from selected programs may be targeted toward a common goal, these funds still must be tracked to ensure that they are spent according to the intent of their programs.

In addition, coordinated services are designated to improve the learning of all students. However, students with special needs must be provided appropriate support to reach high standards.

How AEL Can Help

The Region IV Comprehensive Center at AEL has developed a series of training modules for planning teams: *Making Resources Matter: A Systematic Approach to Developing the Local Consolidated Plan*. Ten modules—which include clear explanations and work sheets—are designed to guide teams throughout the planning process. The modules explain what consolidated planning is and is not and address such topics as establishing the team, creating a district vision and mis-

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sion, conducting a needs assessment, identifying and selecting research-based programs and strategies, planning professional development, linking the pieces of a consolidated plan, budgeting, implementing the plan, and charting progress and revising the plan.

The modules will be available from the Center in the summer of 1999. For further information on *Making Resources Matter* or assistance with consolidated planning, call AEL at 800-624-9120.

The Region IV Comprehensive Center at AEL is one of 15 centers across the nation. Authorized by the 1994 Elementary and Secondary Education Act, these centers help states, school districts, and schools integrate their federal resources to improve teaching and learning for all students, including those with special needs. The centers' two priorities are assisting Title I schoolwide programs and helping local education agencies (and schools funded by the Bureau of Indian Affairs) that have the highest percentages or numbers of children in poverty. ■

Needs Assessment: A Vital Part of the Planning Process

Many of us are good at breaking tasks and information down into smaller pieces—an approach that helped Henry Ford mass produce automobiles at the turn of the century. But we may be less experienced at looking at small bits of information and putting them back together to form a coherent, holistic picture. A *needs assessment* can help schools and districts examine data (bits of information) in a way that helps them get a "big picture" of strengths and weaknesses, determine root causes of the identified problems, make connections, and establish priorities.

Need: The discrepancy between what is and what should be. **Needs Assessment:** The systematic process of gathering information necessary to identify needs of specific groups of people.

Conducting a comprehensive needs assessment is the most crucial step in the process for those planning to consolidate programs and resources. Data gathered from a variety of sources provide information relevant to student achievement. Accumulated data can help define a situation, show how prevalent it is, and show how it has changed over time. This information creates a comprehensive view of a school or district rather than just a snapshot.

Planning teams should examine several categories of data (i.e., student attendance, grades and test scores, and behavior; faculty experience, training, and characteristics; demographics; instructional materials and programs; student and faculty handbooks; and budgeting). Once the data are organized and represented in understandable ways, the planning team can identify discrepancies between the current status and desired levels of achievement.

An important but frequently overlooked step is for team members to make "best guesses" (based on data and fact) about the possible reasons for discrepancies between where the district should be and where it is. As team members explore root causes for low-performing areas, they are likely to identify similarities between possible reasons for low performance. Common or similar reasons, grouped together, form a priority.

Many factors contribute to low student achievement. Conducting a needs assessment permits a planning team to identify these factors and select programs and strategies that target the real problems.

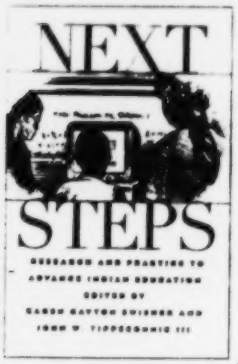
Below is an example of one piece of the needs assessment process from *Making Resources Matter: A Systematic Approach to Developing the Local Consolidated Plan.*

Identifying Strengths, Needs, Root Causes, and Connections—Sample Worksheet

Data Needed or Collected	Where We Should Be	Where We Are	Discrepancy	Possible Reason(s) for Discrepancy
Math test scores for grades 3-6	100% of students working at or above grade level	57% testing at or above grade level	43% of grade 3-6 students testing below grade level in math	Math taught late in the day Math skills of students entering 3rd grade are low Switch from departmentalized to self-contained teaching in the elementary schools New test (scores were low throughout the state) New math textbooks do not align with state assessment Math classes focus on computation; often students are not engaged

New AEL Products

From the ERIC Clearinghouse on Rural Education and Small Schools



Next Steps in American Indian Education

What is "Indian education" today? How will it look in the future? Editors Karen Gayton Swisher and John W. Tippeconnic III asked these questions of a dozen indigenous scholars and practitioners working in American Indian and Alaska Native education. The essays they received became *Next Steps: Research and Practice to Advance Indian Education.*

This book helps readers explore two important themes. The first theme is education for tribal self-determination. Tribes are now in a position to exercise full control of education on their lands. They have the authority to establish and enforce policies that define the nature of education for their constituents, just as states do for their school districts. The second theme is the need to turn away from discredited deficit theories of education to an approach that builds on the strengths of Native languages and culture and the basic resilience of indigenous peoples. This second theme could be especially important for the 90% of Indian students who attend public schools.

Karen Gayton Swisher, Ph.D. is dean of instruction at Haskell Indian Nations University. John W. Tippeconnic, III is a professor of education at The Pennsylvania State University, where he directs the American Indian Leadership Program.

317 pp., 1999, soft cover, ISBN 1-880785-21-8, $24

Free ERIC Digests

Digests are two-page (1,500-word) summaries of the education literature on a specific topic, including a reference list of 10 or more sources for additional in-depth information. Digests are brief, informative, and easy to read.

- *Assessing LEP Migrant Students for Special Education Services.* J.R. Lozano-Rodriguez & J. Castellano (1999), EDO-RC-98-10
- *Responding to Undocumented Children in the Schools.* S. C. Morse & F. S. Ludovina (1999), EDO-RC-99-1

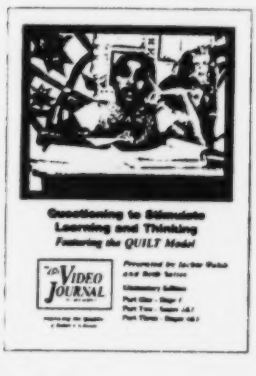
(continued on page 7)

AEL Makes Video Appearances

Video Journal Introduces QUILT Program

John and Blanch Linton don't fit the filmmaker stereotype. The self-effacing, soft-spoken husband and wife look like grandparents getting ready to coast quietly into retirement.

When the lights and cameras come on, though, the two are as professional as any big name in Hollywood.



The Lintons are the creators, owners, and producers of *The LPD Video Journal of Education,* now in its eighth year. Last June, in response to subscriber requests for information about classroom questioning, the Lintons arranged to tape AEL's national QUILT training-for-trainers event in Lexington, Kentucky. They and two crew members spent three days learning about and taping the processes that make up Questioning and Understanding to Improve Learning and Thinking (QUILT).

After getting the theory and training on tape, the Lintons visited elementary, middle, and high schools that practice QUILT. They taped classroom sessions that demonstrate QUILT techniques and interviewed some of the teachers. Volume 8, Issue 4, titled *Questioning to Stimulate Learning and Thinking,* is in subscribers' hands and available for individual purchase.

As Blanch explained, "Once we got into the writing and editing, we realized that we needed to present the QUILT model rather thoroughly. It became clear that we couldn't do it justice in the 70 minutes we'd planned. When we decided to use three tapes rather than two, we had room to include in-depth teacher interviews that make a very powerful presentation."

"We had funny quirks along the way," she continued. "The first writer we assigned sold a script to Hollywood and left in the middle of the job. The duplication company changed hands just as we were sending the QUILT issue, so it was delayed in that transition. But I think sometimes those little challenges lead to doing your best work, and we feel this is one of the best things we've done. Beth and Jackie [Sattes and Walsh, co-creators and trainers] are so good that they motivated all our people to do their best. For example, our editor got really excited about the model and spent a lot of time creating some wonderful quilt graphics."

Linton concludes, "This was a wonderful project to work on, and we all learned a lot from it. We cross paths with a

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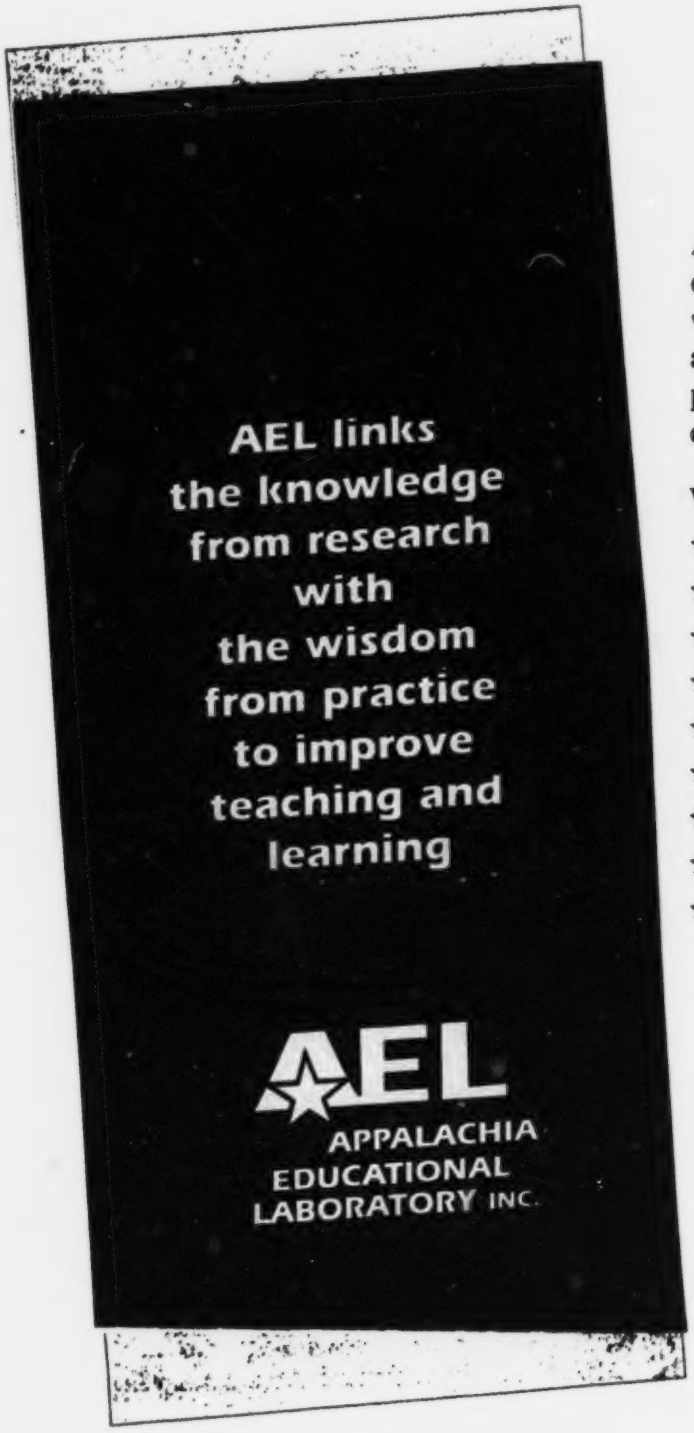

AEL is a nonprofit education research, development, and service institution that works closely with schools, school districts, and states to develop research-based, practical products and processes to address the real issues of real educators.

We provide

- ☆ **field-based research**
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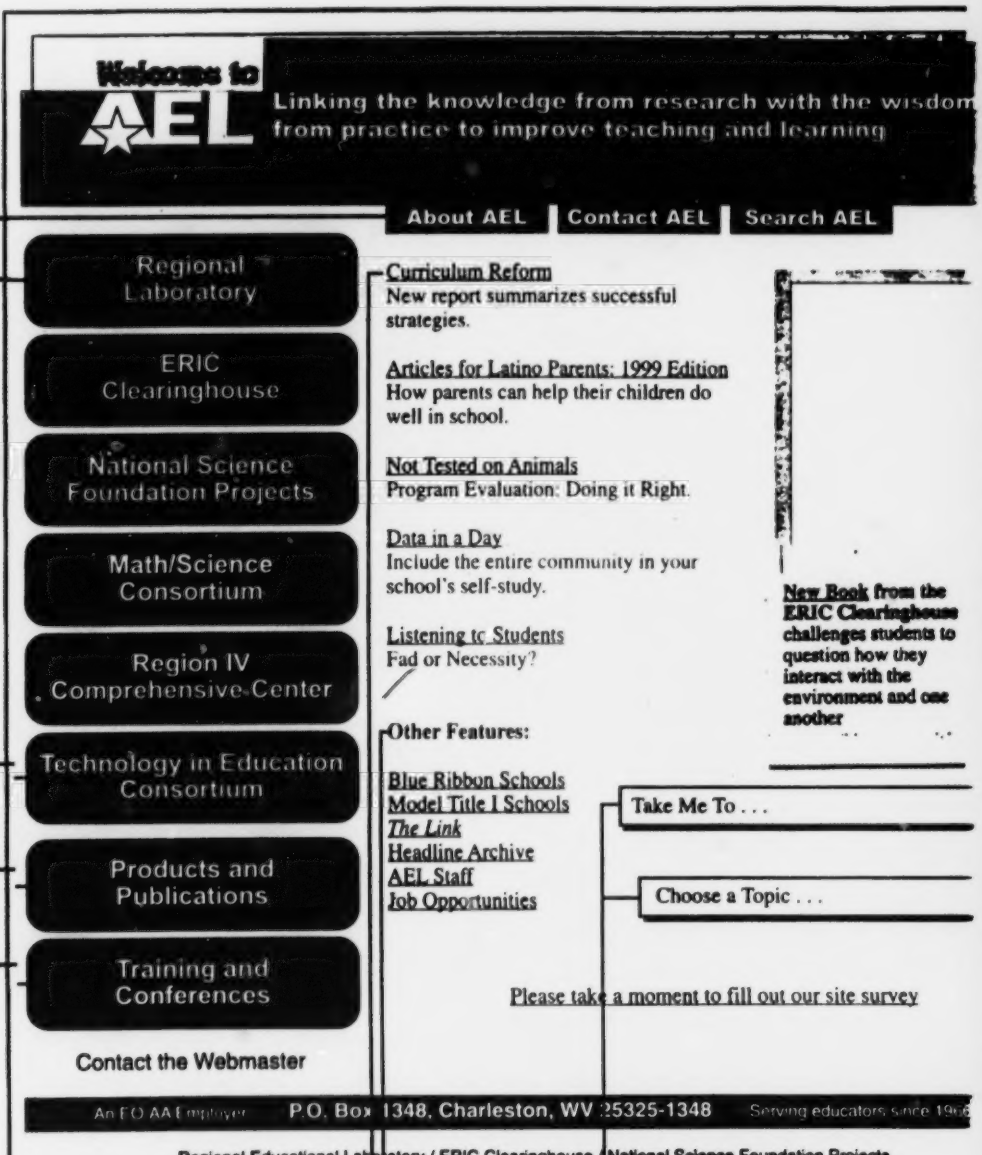
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Other Features
Some of the most requested items on AEL's Web site

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Quick links to your favorite AEL projects or Web site features

Choose a Topic . . .
Helpful information on classroom activities, parent involvement, policy issues, professional development, rural issues, school improvement, and technology in education

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In just a few short years, the World Wide Web has evolved from a luxury to a necessity. More and more, people look for information on-line before turning to other sources. We see evidence of that in the doubling of *hits* on our Web site in the past year.

Anticipating your need for *instant information*, we designed our Web site in July 1997 to be product oriented (deliver information or service), dynamic (change regularly), and interactive (invite your participation). Every two weeks we update our home page to feature headlines about timely education issues and announcements of new products and services.

We gave our Web pages a facelift in March 1999 in response to reader comments. Now you can navigate our site with easier-to-read buttons and new search features. The *Search AEL* button, as well as the *Take Me To* and *Choose a Topic* pull-down menus, will help you locate information on various education topics and specific AEL projects. And, if you visit us regularly, you will begin to notice more photos and illustrations.

Plus, our Web site contains easy-to-find facts about the regional laboratory's four states (Kentucky, Tennessee, Virginia, and West Virginia), times and locations of conferences and training events, sources of technical assistance, the latest news about the Comprehensive School Reform Demonstration program, and information about nationally recognized Blue Ribbon and Title I schools.

When you visit, please take time to fill out our site survey. Let us know what you think of our new look, and tell us what you'd like to see featured. We'll even let you know about our Web updates—just click on *Contact the Webmaster* and add your name to the subscriber list.

We hope you'll make AEL a favorite among your education bookmarks.

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27

Is AEL a favorite among your education bookmarks?

AEL is guided by educators and others concerned about education through a 28-member Board of Directors from its primary service area—Kentucky, Tennessee, Virginia, and West Virginia. AEL's major work is funded through several contracts and grants from the U. S. Department of Education.

Appalachia Educational Laboratory

The Laboratory is one of 10 Regional Labs located across the country. With educators in the four states, the Laboratory designs R&D-based professional development, develops new processes and products through systematic R&D, evaluates education programs, serves as a neutral convener of state or regional groups, studies the implementation of state policies, and synthesizes and disseminates R&D-based information.

Region IV Comprehensive Center

The Center helps recipients of Elementary and Secondary Education Act funds improve teaching and learning in their schools. The Center works in six states (AEL's four plus North and South Carolina) with departments of education, local districts, and high-poverty schools to help coordinate and consolidate the services of federally funded education programs. These programs serve high-poverty, migrant, immigrant, limited-English-proficient, neglected or delinquent, homeless, Indian, and disabled students.

Eisenhower Regional Consortium for Mathematics and Science Education

The Eisenhower Consortium sponsors professional development that reflects both the national standards and individual states' curriculum frameworks. It also gives teachers greater access to technology—including training in classroom applications of technology—and provides information about opportunities and resources related to reform. The Consortium works with state steering committees of mathematics and science teachers and educators.

ERIC Clearinghouse on Rural Education and Small Schools

The Clearinghouse is part of a nationwide system of 16 clearinghouses in the Education Resources Information Center. Each clearinghouse is responsible for adding to the ERIC database education-related works on specific topics. AEL's Clearinghouse enters works on rural education and small schools, American Indians and Alaska natives, Mexican Americans, migrants, and outdoor education. The computer-searchable database makes research-based articles and resources available to all nationwide. The Clearinghouse conducts free searches and produces books and research summaries in its topic areas.

Regional Technology in Education Consortium

The Consortium helps schools integrate technology in their classrooms. It provides technical assistance, professional development, and technology-related information; and works intensively to study the kinds of assistance that help schools move forward in classroom applications of technology. It works in the four states as a partner in the Southeast and Islands Regional Technology in Education Consortium.

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Linking the knowledge from research with the wisdom from practice to improve teaching and learning

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And	+cats +pets	cats AND pets cats & pets	cats AND pets +cats +pets	+cats +pets	cats AND pets +cats +pets
Or	cats kittens	cats OR kittens	cats OR kittens	cats, kittens	cats OR kittens
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Exact phrase	"pet care"	"pet care"	"pet care"	"pet care"	"pet care"
Complex Searching	Use Advanced Search +	(cats or kittens) AND NOT Wild	(cats OR kittens) AND NOT Wild	N/A	(cats or kittens) AND NOT Wild
Truncation/ Wild Card	Use Advanced Search *	cat* wom*n	automatic suffixes	N/A	N/A
Proximity	mary-lamb *(within 10 word*	mary-lamb mary NEAR lamb *(within 10 words)*	[mary lamb] *(within 25 words)*	[mary lamb] *(within 100 words)*	N/A

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From ERIC

(continued from page 6)

- *Schools, Principals, and Teachers Serving American Indian and Alaska Native Students.* D. M. Pavel (1999), EDO-RC-98-9
- *Outdoor Education and the Development of Civic Responsibility.* J. A. Boss (1999), EDO-RC-98-5
- *The Foxfire Approach to Teaching and Learning: John Dewey, Experiential Learning, and the Core Practices.* B. A. Starnes (1999), EDO-RC-98-6
- *Charter Schools: An Approach for Rural Education?* T. Collins (1999), EDO-RC-98-3
- *Homeless Children: Addressing the Challenge in Rural Schools.* Y. M. Vissing (1999), EDO-RC-98-1
- *A Practical Look at Comprehensive School Reform for Rural Schools.* T. Sherwood (1999), EDO-RC-98-2
- *Rural African Americans and Education: The Legacy of the Brown Decision.* P. S. Kusimo (1999), EDO-RC-98-4
- *Sociodemographic Changes: Promise and Problems for Rural Education.* G. G. Huang (1999), EDO-RC-98-7
- *Current Literature on Small Schools.* M. A. Raywid (1999), EDO-RC-98-8

To order ERIC publications, contact: ERIC/CRESS, P.O. Box 1348, Charleston, WV 25325-1348; telephone 800-624-9120; e-mail: ericrc@ael.org ■

Video Journal

(continued from page 6)

lot of educators and have shared QUILT with them. There's interest out there. With the concern for raising student achievement, we're all realizing that we've got to do what we do in the classroom much better. This uses a research base to get people excited about making questioning more scientific."

There are two editions of the QUILT Video Journal, *an elementary (#804E) and a secondary (#804S). Each costs $395, or get both for $595. Each provides an introduction to QUILT through three videotapes, an audiotape of the soundtrack, and a guidebook that suggests before- and after-viewing activities and discussion questions. To order, contact* The LPD Video Journal of Education *by phone at 800-572-1153 or on the Web at http://www.videojournal.com. For information about QUILT training, contact Beth Sattes at AEL. Phone 800-624-9120, e-mail sattesb@ael.org, or visit our Web site at http://www.ael.org/rel/quilt.*

Documentary Describes AEL Project in Southern West Virginia

What would happen if a whole community believed its daughters should learn as much as possible about mathematics and science? What if this belief extended even to girls from the humblest corner of a rural county that had experienced long-term poverty? Would it make a difference? With funding from the National Science Foundation, AEL staff members Patricia Kusimo, Carolyn Carter, and Marian Keyes devoted three years (1995 to 1998) of intensive research and development work to addressing these questions.

The "Voices of Girls in Science, Mathematics, and Technology" project explored ways communities, families, and schools can support girls' achievement in math and science through mentoring, advocacy, and challenging hands-on learning experiences. The project showed that all girls, regardless of circumstances, can learn these subjects when there are high expectations and sufficient support. It also showed the impact families can have on raising expectations among school personnel and strengthening the curriculum, when families understand *why* it is important and *how* to advocate for their children. Everyone in this effort won big: the girls, the community, and the schools.

From the beginning, documentary filmmakers John Nakashima and Charles "Chip" Hitchcock followed the girls in the rural site. They accompanied AEL staff and the girls to meetings and workshops in the schools and in the community, interviewing girls, families, and school officials and recording hundreds of hours of video. Nakashima and Hitchcock, who also work at WNPB-TV (Morgantown, WV) have now created a one-hour documentary. It is inspiring and full of hope about what can happen when people get together to support achievement at the community level.

On Friday, May 21, at 1 p.m., all three West Virginia Public Television stations will broadcast *Voices of Girls*. Check TV listings for local channel information. AEL and the ERIC Clearinghouse on Rural Education and Small Schools will distribute videotapes of the documentary beginning in late May. For more information, contact Robert Hagerman or Pat Hammer (800-624-9120; e-mail hammerp@ael.org). ■

Carolyn Carter

During the 1995-96 school year, Voices girls participated in Saturday workshops. Here, Christy Knuckles, Tessa Lane, and Keesha Thompson work on their quilting projects as they learn geometry in a real-world context.

Publications of Interest

From the Eisenhower National Clearinghouse

The Eisenhower National Clearinghouse for Mathematics and Science Education is a repository of current mathematics and science resources available to educators, students, parents, and others. For more information, visit the ENC Web site at http://www.enc.org. The Eisenhower Regional Consortium for Mathematics and Science Education at AEL is part of ENC's national network to improve math and science education. The Consortium provides technical assistance and professional development on topics important to the region. For more information, visit our Web site at http://www.ael.org.

Strategies for Science Professional Development

The Eisenhower National Clearinghouse has just published *Ideas that Work: Science Professional Development.* This free publication highlights 15 strategies for effective professional development for science teachers. The descriptions of each strategy cover the elements necessary for program design and implementation as well as special issues for educators to consider. Each strategy is illustrated with examples of existing programs. Additional programs are featured and contact information for all programs is provided.

Ideas that Work: Science Professional Development was produced in cooperation with Susan Loucks-Horsley, one of the authors of *Designing Professional Development for Teachers of Science and Mathematics*, published by Corwin Press. Last year, ENC published *Ideas that Work: Mathematics Professional Development*, which covers the same strategies and features professional development programs specifically for mathematics teachers.

To request copies of this publication, contact the Eisenhower National Clearinghouse at 1929 Kenny Road, Columbus, OH 43210, phone 800-621-5785, or e-mail editor@enc.org.

Mathematics Professional Development

The Clearinghouse's first professional development package, *Teacher Change: Improving K–12 Mathematics*, is a collection of resources to help educators and professional development providers facilitate discussion and reflection on improving K-12 mathematics. The materials include

- a set of professional development activities created by ENC and the Midwest Consortium for Mathematics and Science Education at NCREL that includes facilitator notes, PowerPoint presentations, and all handouts
- an overview of teacher change written by international authorities Michael Fullan and Andy Hargreaves
- data and information from the Third International Mathematics and Science Study (TIMSS), including all released TIMSS test items
- a variety of teacher narratives and case studies for discussion

A corresponding CD-ROM and limited supply of notebooks is scheduled for publication by May 16.

A Magazine for Classroom Innovators

ENC is launching a new print and on-line publication, *ENC Focus: A Magazine for Classroom Innovators*. While the primary audience is K-12 classroom teachers, the publication contains information of interest to school administrators and policymakers, teacher educators, parents, community members, and all those concerned about education improvement.

The theme of the inaugural issue is Innovative Curriculum Materials, and the magazine also contains descriptions of innovative K-12 mathematics and science materials from the ENC's vast collection. Other features include essays, classroom stories, and regular columns on such topics as using the Internet in the classroom and applying for grants. The theme of the second issue of the magazine will be Inquiry and Problem Solving.

The on-line version of the magazine will soon be available on the ENC Web site (http://www.enc.org). Subscriptions to the print version are free on request.

For more information, contact Annette Thorson by phone at 614-292-3728 or by e-mail (athorson@enc.org). Publication of the first issue was scheduled for April 16.

Other Publications Available

To request copies of the following publications, contact Tracy Crow at ENC by phone at 614-292-9249 or by e-mail (tcrow@enc.org).

- *Ideas that Work: Mathematics Professional Development*
- *ENC Focus: Integrating Math and Science* (limited quantities)
- *ENC Focus: Laserdiscs and CD-ROMs for Science* (limited quantities)
- *ENC Focus: Multicultural Approaches in Math and Science*
- *ENC Focus: Informal Math and Science Education*
- *ENC Focus: Family Involvement in Education*
- ENC Posters (Boxes of flat posters and boxes of posters in mailing envelopes)
- *ENC Update*, the final issue (a descriptive brochure)
- *Guidebook of Federal Resources for K-12 Mathematics and Science (1998-1999)*

ANNOUNCEMENTS AND INFORMATION

AEL has planned several summer activities for educators; we hope to see you at one. Visit the Training and Conferences page of our Web site (http://www.ael.org/training.htm) for more information.

Effective Questioning to Increase Student Achievement: QUILT Training for Trainers
June 20-25, Lexington, KY

Designed to increase student learning by improving teachers' classroom questioning techniques, QUILT—Questioning and Understanding to Improve Learning and Thinking—complements and supports many staff development and school reform programs.

This training of trainers helps districts prepare cadres of teachers who can train others. Typically, a local school team (two teachers and an administrator) attends the training. QUILT has been successfully implemented in elementary, middle, and high schools.

Registration costs $675 per person. *Special for Kentucky schools:* The Kentucky Department of Education has grants available to help nine schools send teams to 1999 QUILT training. For more information, visit our Web site or contact Sandra Orletsky or Beth Sattes by e-mail (orletsks@ael.org, sattesb@ael.org) or phone 800-624-9120.

Interdisciplinary Teamed Instruction: 1999 Summer Institutes
June 21-25, Salt Lake City, UT
July 12-16, Lexington, KY

This reform strategy builds collaboration and promotes integration across the school curriculum. It enables teacher teams, students, administrators, and community members to weave standards, curriculum, instruction, and assessment into a relevant, rich tapestry of learning experiences.

Each team leaves the weeklong institute with

- a plan for implementing interdisciplinary teamed instruction
- a team-developed integrated unit
- specific instructional practices such as project-based learning and community-based learning
- strategies for developing alternative assessments and performance criteria and scoring rubrics
- resources for effective teamwork, community-building, and networking

Registration fee of $450 per person will be accepted until June 1. Teams of six or more receive a 10% discount. *Special to Kentucky educators:* The Kentucky Department of Education has scholarships available for the Lexington institute.

Visit our Web site for more details, or contact Rebecca Burns by e-mail (burnsr@ael.org) or phone 800-624-9120.

Curriculum Showcase on Standards-Based Mathematics and Science Programs
July 25-27, Washington, DC

This conference, sponsored by the Eisenhower Regional Consortia at AEL and Research for Better Schools, will showcase the new National Science Foundation (NSF) K-12 Curriculum Development Projects for mathematics and science. The projects are aligned with the National Council of Teachers of Mathematics Standards and the National Science Education Standards.

Direct, hands-on workshop experience with each project will be offered, as well as information and discussion that will facilitate implementation at the school level.

The Sunday evening through Tuesday afternoon conference is open to teams of educators from each of the states in the Mid-Atlantic and AEL regions.

If you're considering adopting new mathematics and/or science materials, send a team of educators to the conference. For a limited number of teams of three or more, conference sponsors will pay the two-night lodging costs for one participant. Contact Susan Taylor (taylors@ael.org) or Bill Geppert (geppert@rbs.org) about the offer.

Registration costs $80 per person through June 1, and $100 thereafter. The fee includes materials, two lunches, and breaks, as well as summaries of each NSF project. Participants are responsible for travel and accommodations. To register, visit our Web site or contact Carol Crociante, 215-574-9300, ext. 280; e-mail: crociante@rbs.org.

Inquiry Into Improvement: Quest for SMART Learners
July 26-27, Gatlinburg TN

SMART stands for successful, motivated, autonomous, responsible, and thoughtful—all characteristics that can apply to teachers, administrators, and parents as well as students. All are invited to this symposium on active learning, motivation, learning with technology, brain-based learning, and more. Presentations will include some specifically for parents, which will address such topics as assessment for beginners and standards for parent involvement.

A highlight of the symposium will be Jody Westbrook's daylong workshop on motivation. Participants will consider how to create an environment that encourages self-motivation through reading and analyzing case examples, assessing their own individual styles, and discussing with others. Westbrook is a consultant with the Center for Creative Leadership.

For more information, visit our Web site or contact Beth Sattes or Shirley Keene by phone at 800-624-9120 or e-mail (keenes@ael.org).

Technology in the Schools: Can We Make It Work?

By Robert L. Bangert-Drowns and Curtis Pyke, Center on English Learning & Achievement

America is investing enormous sums of money to bring the information revolution to its schools. Unfortunately, there is no commensurate investment in pedagogical reform to match the investment in electronics. In fact, little is known about effective strategies for integrating technology into education. With no clear vision of effective technology use, teachers may resort to simple "exposure" episodes, allowing students access to software with little curricular support.

We advocate a twofold vision of effective learning with technology. First, we think it valuable to conceive of software and video as electronic text, and interactions with electronic text as a kind of literate act. As with paper-based text, reader-viewers can derive personal meanings from electronic text by employing rhetorical and experiential knowledge and evaluative reasoning to the information organized there. Second, we think it valuable to conceive of effective interactions with software as instances of cognitive engagement—the mobilization of cognitive, affective, and volitional resources to explore and interpret one's experience.

Can we characterize student engagement with electronic text? From research on what it takes to become highly literate, we developed the term "literate thinking" to define our highest expectations for students at work with educational technology. By literate thinking we mean the capacity to recognize the importance of their own perspectives in deriving meaning from what they observe or experience and the capacity to consider alternative perspectives and interpretations of those phenomena. We set out to look for instances of students engaged in literate thinking with electronic literature.

We chose an urban elementary magnet school as a suitable site for observing a diverse population of students at work with educational software. We were quickly faced with a paradox: We found it very difficult to find any students clearly engaging in literate thinking, yet we found almost all of the students engaged in some way. From our observations we identified seven patterns of engagement and arranged them according to the degree that they approximated literate thinking. By doing so, we created a taxonomy of seven modes of engagement that we have since found extremely useful in understanding students' work with electronic text—and it may be useful in understanding engagement in other tasks as well.

Brief descriptions of the seven modes of engagement and their ordered arrangement can be found in the accompanying table. We believe that most students encounter unfamiliar software in either a structure-dependent way (if they have seen similar software) or an unsystematic or frustrated way (if they have less knowledge regarding software operation). If the early experiences with the software are negative (that is, uninteresting or unsuccessful), students will tend toward disengagement. However, as students become increasingly familiar with software operation and navigation and increasingly involved with the software content, their engagement tends toward literate thinking.

Ascending the taxonomy, the focus of students' attention shifts from mastering software operation and navigation to mastering software content and ultimately to gaining new insight about themselves. "Ownership" of knowledge becomes increasingly personal, and the student is increasingly capable of self-directed learning and problem solving. Students move from avoidance and distraction in learning to an awareness of higher learning standards and finally to personal expectations for success with learning.

To date we have observed more than a hundred elementary school students at work with software. Invariably, the taxonomy of modes of engagement has proved a useful way of characterizing shifts in the students' interaction styles. Not only does the taxonomy provide teachers with a vision of how effective student-computer interactions look, it equally identifies potentially problematic styles of engagement (disengagement, unsystematic engagement, and frustrated engagement). Hopefully, it also will allow us to identify factors that enhance or diminish engagement. Having a clearer sense of what students are doing with software allows us to explore combinations of software, student, and curricular features for stimulating and supporting higher modes of engagement. Ultimately, we hope to articulate sets of pedagogical strategies that might best derive dividends from the nation's investment in educational technology.

Reprinted courtesy of CELA, this story originally appeared in the Winter 1999 issue of English Update. *Related research was published in the Fall 1998 issue under the title* "Reading" the World Wide Web *and can be found on the center's Web site at http://cela.albany.edu.* ■

How do students engage with educational software?

A taxonomy of modes of student engagement with educational software

Literate thinking

Student understands the content of the software from multiple and personally meaningful perspectives.

Student manipulates software features to explore different perspectives and develop different interpretations as an opportunity to reflect on personal values or experiences.

Critical engagement

Student attempts to identify operational and content-related limitations of the software.

Student manipulates software features, keenly observes the effects of the manipulations, and integrates the results in future interactions to test personal understandings or limitations of the software presentations.

Software structure becomes an object of critical reflection and a stimulus for perspective-taking.

Self-regulated interest

Student creates personal goals within the software to make the software as personally interesting as possible.

Student adjusts software features to sustain deeply involved, interesting, or challenging interactions. Student creatively uses software for personally defined purposes.

Structure-dependent engagement

Student is sensitive to and competent with software operation and navigation.

Student pursues goals communicated by the software. Student may not yet display full mastery of software features, but responds to operational, navigational, or content organization.

Students demonstrate patterns of interaction that make competent use of software structure.

Frustrated engagement

Student possesses clear goals when working with the software but is unsuccessful in accomplishing them.

Student tries to interact effectively with the software, but is unsuccessful. Student knows what the software can do, but cannot accomplish it. Student may manifest stress or frustration in negative comments, confusion, aggression, erratic behavior, agitation, distress, or anxiety.

Students are aware of the goal structure of the software.

Unsystematic engagement

Student has unclear goals when working with the software.

Student moves from one incomplete activity to another without apparent reason. Student successfully completes simple tasks within the software but does not link tasks for higher-order goals.

Students remain engaged with software.

Disengagement

Student avoids working with the software or discontinues use prematurely.

Student resists or stops interacting with the software. Student may sit and tinker with the software in a seemingly purposeless or disinterested way with little or no response to feedback from the computer. Or, student may in fact turn away from the software or resist using it at all.

Technology in the Classroom

Milken Exchange Looks at Technology in West Virginia Schools

Few would question the value of technology in the workplace, but little research of statewide implementation has been done on its value in education. As administrators and policymakers wrestle with decisions about where to spend education dollars, they want to look at something concrete.

Its interest in the role of education technology in improving public schools led the Milken Exchange on Education Technology, an arm of the Milken Family Foundation, to fund a study of West Virginia's Basic Skills/Computer Education program. *West Virginia Story: Achievement gains from a statewide comprehensive instructional technology program* was released in March.

West Virginia has made an unusual commitment to education technology over the past decade. Every year since 1990-91, beginning with kindergarten, the state has provided every public elementary school with enough equipment to put three or four computers, a printer, and a networked file server into each classroom at the grade-level targeted that year. In addition, software and professional development for teachers have been provided as implementation has moved up the grades. Cost per year has been around $7 million.

The Milken study, conducted under the leadership of Dale Mann and Charol Shakeshaft of Interactive, Inc., suggests that West Virginia's program has contributed to gains in test scores. According to the study, analysis of data shows that 11% of the gain in fifth-graders' scores from 1997 to 1998 can be attributed to the technology program.

"I expect we'll see this study discussed and cited frequently in coming months and years," says Merrill Meehan, senior evaluator at AEL. "It is one of so few research efforts in this area that covers such a time span that it's bound to be seen as important. I would join with Cheryl Lemke, executive director of the Milken Exchange, in urging educators and policymakers to—as with any evaluation of a specific program—interpret the findings cautiously. If your goal is to improve basic skills test scores, and if you can leverage the resources to implement a program as comprehensive as West Virginia's, this study has something to say to you.

"It's rich with ideas for potential studies that could also be very valuable. For instance, back in 1990, West Virginia teachers were—like teachers in many places—very uncertain about bringing computers into the classroom. The Milken study only touched on that question, but does suggest that teacher attitudes toward and confidence with technology have become overwhelmingly positive. How that was accomplished and the implications it has for students should be captured."

For a copy of West Virginia Story, *contact the Milken Exchange on Education Technology, 1250 Fourth Street, Fourth Floor, Santa Monica CA 90401. The report is available on the Web at http://www.milkenexchange.org.*

The Link

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AEL is a private, nonprofit corporation. AEL serves as the regional educational laboratory for Kentucky, Tennessee, Virginia, and West Virginia. For these same four states, it operates both a Regional Technology in Education Consortium and the Eisenhower Regional Consortium for Mathematics and Science Education. In addition, it serves as the Region IV Comprehensive Center and operates the ERIC Clearinghouse on Rural Education and Small Schools. AEL's primary source of funding is the Office of Educational Research and Improvement (OERI), U.S. Department of Education. This publication is produced with funds from OERI contract number RJ96006001. The contents herein do not necessarily reflect AEL or OERI policies or views.

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The Link

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AEL

Linking the knowledge from research with the wisdom from practice to improve teaching and learning

CHARTER SCHOOLS
A Regional Perspective, p. 1

LEADERSHIP
AEL Announces New Leadership, p. 2

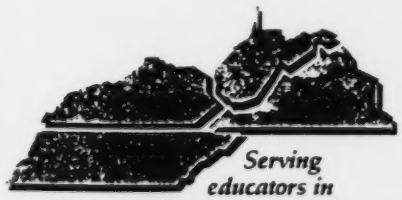
21st CENTURY COMMUNITY LEARNING CENTERS
Building Vital Community Centers, Lighted Schools, West Virginia Dreams, p. 3

VOICES FROM THE FIELD
Student Daniel Birdwhistell, p. 4

RESEARCH NOTES
Professional Development and Student Learning; Work-Based Learning; Teaching Language Minority Students; School Segregation; Overcoming Learning Disabilities; Regional Lab Network Web Site, p. 5

PUBLICATIONS OF INTEREST
Using Classroom Technology Effectively; What Technology Can Deliver; Reducing School Violence; Research on School Improvement; Guidance on School Reform; The Condition of Education; America's Children: Key National Indicators; Helping Teachers Improve, p. 7

BACK TO SCHOOL
How Can Parents Judge the Quality of Their Schools?, p. 10



Serving educators in Kentucky, Tennessee, Virginia, and West Virginia since 1966

A Regional Perspective on Charter Schools

The charter school movement in the United States began about a decade ago and has been growing ever since. President Clinton recently announced federal funding that will increase the number of charter schools from more than 1,700 currently to 3,000 by the year 2001.

Policymakers in Kentucky, Tennessee, Virginia, and West Virginia have taken a cautious approach to charter school legislation. Concerns specific to this region and reports on the status of charter school legislation in AEL member states are addressed in *Charter Schools: The Perspective from AEL's Region,* a new Policy Brief from AEL (see order form/insert for more information). This article summarizes regional concerns and actions.

CHARTER SCHOOLS

Research about Charter School Effectiveness

Charter schools—public schools designed and operated under contracts with public agencies—are too new to be generating much data on student achievement. Studies of charter schools in Michigan, Arizona, and Massachusetts indicate mixed results.[1] In general, parental satisfaction has been high.

Since most charter schools have characteristics associated with student success—small size, high parent involvement, and student choice to attend—and are free from many regulations accompanying public education, they have the potential to positively affect student achievement.[2]

A study of Britain's version of charters found that instead of system reform, education improvement, and choice, charter schools resulted in socially segregated niche schools that have little effect on the system and divert funds from educating students to marketing the school.[3]

Concerns Specific to This Region

Because much of the AEL region is rural, locating appropriate facilities for charter schools may be a problem. Most charter schools lease commercial space, which may be nonexistent in rural areas.[4] Even poor, urban neighborhoods may want for available space. Alternative locations may also raise concerns about suitability, and the costs of bringing such facilities up to code could be prohibitive.

Charter schools are not subject to geographic boundaries and can attract students from anywhere. Charters in more rural areas need to address how to transport students, and whether that responsibility rests with the school, district, or parents. If the district assumes responsibility, shuttling students from all parts of an expansive rural district may prove too costly to be feasible.[5]

Since AEL's four states have an above-average number of special education students, policymakers may want to know how charter schools plan to serve students with disabilities. Reports of lack of access, as well as parental complaints of inadequate services, have prompted the U.S. Department of Education's Office of Special Education Services to develop policy guidelines regarding charter schools and special education.[6]

Legislators may also have concerns about education funds being siphoned from local public schools as federal, state, and local monies follow students to charter schools.

(continued on page 2)

AEL Announces New Leadership

LEADERSHIP

Dr. Allen Arnold has been named as AEL's executive director, succeeding longtime director Dr. Terry Eidell, who retired this summer (see p. 12). Dr. Doris Redfield will direct research, development, and evaluation. Arnold, who was selected after a national search, has committed his professional career to solving community problems through research- and data-based solutions.

"Because of the integral connection between schools, economic development, and community life, the school can be the best focus to build the entire community," says Arnold. "Successful schools are a glue in our civic infrastructure. I believe that. That is the thrust that I am bringing to AEL."

Arnold's background in higher education, community engagement, and technology has prepared him to do just that. For the past seven years, he was the president and chief executive officer of Mott Community College in Flint, Michigan—an area plagued with plant closings and economic upheaval. There, Arnold focused the college not only on providing educational programs but also on promoting economic development and strength in the community.

"Right now," says Arnold, "we see tremendous drive in the individual states for accountability at the local school level. School leaders are seeking to balance community needs and state and national reform agendas. It's a huge task.

"When principals or superintendents or state departments call on AEL, it's because they have a specific need. They expect and deserve a response tailored to their needs. That tailoring is what AEL does best."

Joining Arnold at AEL is Doris Redfield, who is nationally known for her work in education research and assessment. "AEL is truly fortunate to have her join the staff," says Arnold. As Director of Research, Development, and Evaluation, she will lead the kind of targeted research and development efforts AEL has been conducting since 1966.

Allen Arnold's involvement in school reform includes the establishment and supervision of a drop-out intervention high school that has been replicated in Tennessee and Pennsylvania. The model school re-engages disadvantaged or turned-off students by focusing on teacher-student interactions that move students from education failure and "fragility" to high school graduation and college.

Says Arnold, "I appreciate the opportunity to 'come home again' (having attended both Vanderbilt University and the Virginia Polytechnic Institute and State University) to an organization that is committed to linking research and practice. The prospect of assisting schools as they leverage their intellectual capital and material resources to build communities is an exciting one. I look forward to collaborating and working with people throughout the region during the coming months."

Charter Schools

(continued from page 1)

Charters in the Region

Kentucky: Kentucky legislators remain focused on the education guidelines in the Kentucky Education Reform Act of 1990 (KERA). KERA established school-based decision making, which, like charters, grants local schools and communities wide flexibility to choose curricula and spend funds. KERA also provides accountability for school performance.[7]

Tennessee: After reviewing the research on charter schools, the Tennessee State Board of Education developed a framework to use as a guide in reviewing proposed charter school legislation.[8] Tennessee's cautiousness is due in part to lack of information about charter school results. Major issues to be resolved include teacher certification and student participation in statewide testing.[9]

Virginia: In 1998, Virginia enacted legislation that gives local school boards the sole authority to grant charters. In 1999, legislation authorized establishment of regional charter schools. Approved charters will receive up to three-year contracts, and their personnel will be employees of the local school board.

Virginia charter schools must comply with all federal and state laws but may receive waivers from state regulations and local school board policies. At least one-half of a district's charters must be reserved for schools designed to serve at-risk students.[10]

West Virginia: Again, little information about charter school effectiveness may have slowed the introduction of legislation. Since West Virginia is still working to implement the Recht Decision, which ruled the state's school funding mechanism to be inequitable, legislators may be hesitant to complicate the issue by adding charter schools to the mix.[11]

(continued on page 6)

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21st Century Community Learning Centers

"Increasingly, our schools are critical to bringing our communities together. We want them to serve the public not just during schools hours but after hours: to function as vital community centers; places for recreation and learning; positive places where children can be when they can't be at home and school is no longer going on; gathering places for young people and adults alike. Bringing our schools into the 21st century is a national challenge that deserves a national commitment."
—President Bill Clinton, July 11, 1996

Building Vital Community Centers

When Congress established the 21st Century Community Learning Centers program, it envisioned rural and inner-city schools collaborating with community members; public and nonprofit agencies and organizations; local businesses; other educational entities; and community recreational, cultural, and human service groups. By focusing some part of their energies and resources on joint projects to benefit the educational, health, social services, cultural, and recreational needs of local families, they might power a new sense of community that could support lifelong learning for children and adults alike.

To be funded, a Community Learning Center must operate within a public elementary, middle, or secondary school building and it must provide programs for residents of all ages. Its priority must be to offer activities that expand learning opportunities for the children and youth of the community.

Many components may be included in a program proposal: among them are tutoring and homework assistance, nutrition and health programs, expanded library service hours, parenting skills education, recreational and cultural programs, employment counseling, and technology education for individuals of all ages.

As the program moves into its third year, successes are beginning to appear—some of them in communities within the region. The following overviews of two West Virginia programs may inspire others to start programs.

For more information on the program, visit the U.S. Department of Education Web site (http://www.ed.gov/offices/OERI/21stCCLC). AEL's Jane Hange knows the program well and is available to review draft proposals and provide other support. You can reach her by e-mail at hangej@ael.org or by phone at 800-624-9120.

Lighted Schools

Gilmer County families can no longer complain about having nothing to do. Since the school district began its Lighted Schools program in 1997, youngsters and adults have seen their educational, recreational, and cultural opportunities expand dramatically.

The county has actively pursued federal and state grants that support enrichment programs for all residents. The 21st Century Community Learning Centers grant it received in 1998 is just the latest to be incorporated into the vision of "Lighting the 21st Century" through community schools.

Superintendent Rick Butler and project director David Bishop have maintained the focus of their vision while creatively combining resources to get the most bang for every buck. Today Gilmer County Schools offer before-, during-, and after-school tutoring to all students as well as month-long summer academies to students exiting grades 1-6. Evening and weekend programs offer recreational events to people of all ages. Classes in computer skills, parenting, arts and crafts, and more are offered to adults.

The emphasis always is on developing new skills,

(continued on page 4)

West Virginia Dreams

"The most gorgeous setting on earth" is how the southern Lincoln County grant-writing team describes their surroundings. And the core values they espouse in their program complete the picture of a true 21st-century learning community.

Lifelong learning, inclusion of all community members, and independence through cooperation are the values around which West Virginia Dreams is organized. This consortium of five community education centers operates after-school programs, 6-week summer enrichment experiences, family education nights, family outreach events, reading readiness and recovery activities, and community library services. Each of these core programs consists of components that address specific community needs and dreams.

For example, family outreach components include resources and training for key life transitions. Baby showers and Boxes for Babes deliver infant safety and brain stimulation information to soon-to-be and new parents. Toddler Transitions provides developmental screenings for two-

(continued on page 4)

Lighted Schools

(continued from page 3)

whether they be in reading or athletics. Because the area boasts many hunters, gun safety training is an especially popular course. Students enjoy karate and gymnastics classes, too.

Students and other county residents are encouraged to request classes on specific topics—and also to teach them. Anyone who has knowledge or skills to share can propose to teach an after-school or evening class. If the proposal is accepted, grant monies pay for materials, so the activity is free to those who participate.

21st Century Learning

Every school in the county—4 elementary schools and the high school—is a Lighted School, and many youngsters and adults take advantage of the programs. One elementary school has 80% of its students participating in after-school activities. Last year, countywide, 865 of 1188 students participated in school programs, 222 adults attended evening classes, and more than 500 children and adults enjoyed the recreational programs.

How do the children benefit? Lots more homework gets done, and one-on-one assistance from regular teachers and Glenville State College education students gives struggling youngsters a big boost. A substantial snack and the chance to spend more time on the computers keep kids interested. And rural children whose homes are miles apart enjoy the simple pleasure of spending time with their friends.

West Virginia Dreams

and three-year-olds. Ready for School programs discuss Headstart and school readiness.

The various family outreach services are delivered by staff from Headstart, the school system, the Lincoln County Family Resource Network, West Virginia University Extension Service, and Step by Step, an area nonprofit.

Without volunteers, who are often parents and grandparents, successful after-school programs would never survive. West Virginia Dreams has found an effective way to motivate adult participation—matching funds from the community help the program purchase $50 savings bonds for active volunteers. Children can also earn bonds, although their main incentives are the recreational and cultural activities and the sense of accomplishment they get from mastery of academic and technology skills.

Project director Charles McCann and management team members Peggy Adkins, Darlene Dalton, and Michael Tierney involve everyone in planning and evaluating. Community members contributed ideas during the first days of proposal writing and they now participate in monthly focus groups that help coordinators keep the program on track.

Although the program is young (it received funding in January 1999), it has already served more than 350 children and involved more than 50 teen and parent volunteers. In an area that recently had no recreational opportunities for children and adolescents (outside of school sports), no adult education, no public library branch, and no job training opportunities, dreams now have a chance to come true.

Voices from the Field

By Daniel M. Birdwhistell

It was 1996; I was 17 years old and talking about state education reform with some of Kentucky's top education leaders. They looked to me and my peers to give them the student view of what was really going on in the classroom. So that is what we did.

As students, we couldn't speak to the validity of the state KIRIS tests, but we could say that for scores to improve some incentives for students must be provided. We couldn't cite research on implementation strategies for writing portfolios, but we could say that negative attitudes from some teachers and students interfered with a true focus on writing. We couldn't say that we supported all of the reforms because we simply did not know much about them. But we could and did say that change was still needed—and that we wanted to help.

In the nationwide push for reform the student voice is often overlooked. From national education think tanks to local school board meetings, individual stakeholders in education discuss student achievement, standards, scheduling, and teacher quality. They review research and listen to policymakers, teachers, parents, and other experts. Unfortunately, they often forget that some of the real experts are in the classrooms right around the corner.

This is changing. Students in Virginia have lobbied successfully for nonvoting positions on school boards. Members of Kentucky's Education Ambassador Program have conducted research studies and testified before House and Senate Education Committees. Students in South Carolina's Teacher Cadet Program are better informed about education issues.

When students are involved in the reform discussion, everyone wins. First, administrators, teachers, and policymakers gain a better understanding of the ultimate effectiveness of certain practices or reforms; they might also hear some productive and creative ideas on how to improve them.

Second, as students become aware of education issues, they adopt a sense of ownership—not only of their own educations, but also of their schools. They become partners

(continued on page 9)

Research Notes

How Professional Development Affects Student Learning

At the Wisconsin Center for Education Research, National Institute for Science Education researcher Mary Kennedy examined literature on effective professional development programs for science and mathematics teachers.

Kennedy focused on studies that examine the effects of programs on student learning. She found that programs that focused mainly on pedagogical strategies demonstrated smaller influences on student learning than did programs that focused on teachers' knowledge of the subject or on how students learn the subject. Moreover, the knowledge provided by these more successful programs tended *not* to be purely about subject matter—that is, they were not courses in mathematics—but instead were about *how students learn* that subject matter.

Kennedy's research was jointly sponsored by the American Institutes for Research and the National Science Foundation.

Read more about the study in the Spring 1999 issue of *WCER Highlights*. It and information about the National Institute for Science Education can be found at http://www.wcer.wisc.edu.

Research on Work-Based Learning

The Institute on Education and the Economy at Teachers College of Columbia University has several recent publications on education and work reform.

- *Employer Recruitment is not the Problem: A Study of School-to-Work Transition Programs* (No. 21, July 1998). A three-year research project focused on the question of whether sufficient numbers of employers can be recruited to create a national school-to-work system with a substantial work-based learning component. Of the programs studied, some had more difficulty recruiting students than employers. The study concluded that the main hurdle is getting the various constituencies to buy into creating an integrated, quality school-to-work system. For such a system to become universal, it will need to be perceived as improving learning.
- *The Effects of Career Magnet Schools* (No. 22, December 1998). This brief distills the results of a major research study comparing graduates of career magnet programs to graduates of comprehensive high schools in a large metropolitan area. At the magnet schools, drop-out rates were somewhat higher and graduation rates somewhat lower than at the comprehensive schools. However, for many students, the presence of a career focus seemed to help them move through the indecision of adolescence and build a career identity. The study concludes that career magnet schools can be inexpensive, attractive to students and teachers, and, if implementation is even moderately well done, have high payoffs for many students.
- *Toward a Theory of Work-Based Learning* (No. 23, January 1999). The fact that a student spends time in a knowledge-rich environment does not necessarily suggest that he or she acquires that knowledge. For learning to occur, the student must engage the knowledge over time. This brief proposes a theory of experiential learning to aid in understanding productive activity in real-world settings.

For copies of the reports, contact the Institute on Education and the Economy, Box 174, Teachers College, Columbia University, New York, NY 10027, or visit http://www.tc.columbia.edu/~iee.

Teaching Language Minority Students

As English becomes the language of wider communication in the Pacific islands region, cultural and language use changes are increasingly apparent and are a matter of concern for local educators and community members. Language policies and practices have educational and social consequences that are not always beneficial for students and their communities.

Pacific Resources for Education and Learning (PREL) has studied how language choices affect students' academic achievement and career preparation. *Language of Instruction: Choices and Consequences* discusses the interdependence of language and cognitive development. Recent research shows that gaining academic proficiency in the first language can ease the transition to mastery of a second language. When the school system mandates the use of English only, which is many students' second language, students may never achieve full literacy in either language.

Ethnic language preschools seem to help children acquire first-language literacy so they adjust well to English-only elementary schools. These ethnic preschools also help children develop their cultural literacy, building a foundation for understanding another, English-speaking, culture.

For copies of this and other publications on language and literacy, write PREL, Ali'i Place, 25th Floor, 1099 Alakea Street, Honolulu, HI 96813-4513, e-mail publications@prel.org, or download from http://www.prel.org.

School Segregation Increasing

As the United States becomes more racially and ethnically diverse, students in U.S. public schools find themselves increasingly segregated. *Resegregation in American Schools,* a new study by The Civil Rights Project

(continued on page 6)

Research Notes

(continued from page 5)

and researchers at the Harvard Graduate School of Education, shows a steady trend toward racial segregation that began in the late 1980s.

Using data from the National Center for Education Statistics, the study offers these findings:

- Segregation by race is strongly related to segregation by class and income. Racially segregated schools for all groups except whites are almost always schools with high concentrations of poverty.
- Latinos, fast becoming the largest minority group in the country, attend the most severely segregated schools.
- The region that is resegregating at the fastest rate is the South. The percentage of Black students in majority white schools fell from a peak of 43.5% in 1988 to 34.7% in 1996.
- Whites remain most isolated from all other racial groups and are the only racial group who attend schools where the great majority of students are from their own race.

The study concludes by discussing policies that could help reverse the trend toward intensifying segregation. To download the report, visit http://www.law.harvard.edu/civilrights/.

New Regional Educational Laboratory Web Site

Opening an Internet path for quick access to education research and development, the national network of 10 regional educational laboratories recently launched REL Network, a joint Web site. For the schools and communities served by AEL, the site scales up local and regional ability to obtain a wide range of resources. The new site links the 10 laboratories, details each lab's specialty area and describes key projects in that area, provides updates on what is new and noteworthy, gives detailed contact information, includes a news archive, and provides lab publications. A search function allows access to information from a particular laboratory or from all 10. Visit http://www.relnetwork.org.

Overcoming Learning Disabilities

Currently, more than 2.5 million children with learning disabilities attend public schools. A vast body of research addresses teaching these children, but many questions linger.

The answers to these questions will provide the foundation for changes that will result in early and effective intervention, fewer children in learning disability programs, and a better education for children.

Here are some of the findings discussed at a recent national summit on research in learning disabilities.

- The most effective form of teaching children with learning disabilities combined components of direct instruction (teacher-directed lecture, discussion, learning from books) with components of strategy instruction (ways to learn such as memorization techniques and study skills).
- The teaching component most linked to student achievement was control of task difficulty (where, for example, the teacher provided necessary assistance or sequenced tasks from easy to difficult). Another influential component was the use of interactive groups of five or fewer students. Also important was the use of structured questioning and directed responses.
- In reading, both phonics and whole word (whole language) instruction make significant contributions to achievement.

To view a video of the live Webcast and read the executive summaries of research presented at the summit, visit the LD OnLine Web site at http://www.ldonline.org/ncld.

Charter Schools

(continued from page 2)

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New AEL Products

Creating Safe Rural Schools Videotape

As rural educators plan for a new century of public schooling, their major focus mirrors that of educators 100 years ago—student learning. Today, unfortunately, schools are encountering a roadblock not anticipated five generations ago—school violence. Although some people may think of rural schools as peaceful retreats from a largely urban problem, rural communities are not exempt from the possibility of violence, which diminishes the climate for learning.

In this videotape, suggestions for creating safe settings for rural schools are offered by educators who have designed and implemented safety programs at the state, district, and school levels. These educators spoke with callers from across the nation in an interactive videoconference sponsored by AEL in collaboration with other regional laboratories on May 3, 1999. The discussion was moderated by Marie Hill, former professor at East Tennessee State University and coauthor of *Creating Safe Schools—What Principals Can Do.*

WV School Improvement Council Kit Revised

AEL and the West Virginia Department of Education recently updated the codes and policies in the Local School Improvement Council Kit.

The kit's three components—an informational handbook, a facilitator's manual, and a videotape—provide team-building activities that can be used as a workshop for all council members or as information resources by individual members.

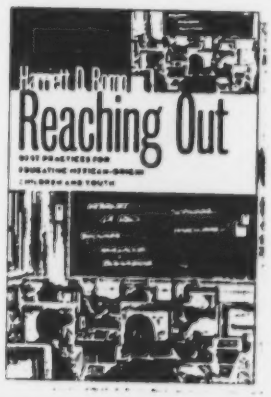
Safe Schools

School safety has become a topic of great concern in recent months. To help everyone from principals to parents understand and deal with this important issue, AEL has added a special page to its Web site.

Visit http://www.ael.org/safeind.htm for information and resources.

From the ERIC Clearinghouse on Rural Education and Small Schools (ERIC/CRESS)

A Thoughtful View of Education for Mexican-Origin Students



In this book, Harriett D. Romo of the University of Texas at Austin examines difficulties encountered by Mexican-origin students. *Reaching Out: Best Practices for Educating Mexican-Origin Children and Youth* describes successful approaches to improving outcomes for this growing population of U.S. students.

In many urban areas, Mexican-origin and other Latino children constitute a majority of public school students; nationwide they outnumber Black children. As these children encounter critical transitions from preschool through elementary, middle, high school, and on, many talented students give up on education. Their individual decisions to leave school result in a high school completion rate of only 62 percent and low participation in postsecondary programs.

Some educators and communities have done better than others in improving outcomes for Mexican-origin students. Romo examines these efforts, focusing on key factors such as cultural values and practices that profoundly impact student achievement, approaches to language instruction that help or hinder the integration of immigrant children into the classroom, and removing barriers to immigrant parent involvement.

Romo emphasizes the need to increase understanding about cultural influences: "The tenacity and importance of ethnic cultures and a recognition of the strengths that children bring to the classroom, rather than the deficits, are at the heart of the questions of incorporating immigrant students into U.S. society."

Talk with ERIC Authors On-line

When reading a book raises provocative questions or spurs creative thinking, having an opportunity to talk to the author can be very satisfying. This fall, ERIC offers several such opportunities.

Readings are posted on-line in advance, then readers and authors can share their thoughts via listserv. From November 1 to November 5, John W. Tippeconnic III and Karen G. Swisher will discuss *Next Steps: Research and Practice to Advance Indian Education.* Join Clifford E. Knapp from November 8-12 to explore his book, *In Accord with Nature: Helping Students Form an Environmental Ethic Using Outdoor Experience & Reflection.* The following week, November 15-19, Harriet Romo will be on-line to discuss best practices for educating Mexican-origin students (see story above).

To sign up, visit http://www.ael.org/eric/chat.htm or phone 800-624-9120. Registration is free.

See inside for ordering information.

Resources Available from AEL

Some documents can be downloaded from our Web site: http://www.ael.org

___ **A Guide to Gender Fair Education in Science and Mathematics (1998)**
This publication presents information gathered from the research and programs developed by hundreds of teachers and researchers in the field of educational equity. The activities highlighted are examples of programs supported by the U.S. Department of Education and National Science Foundation, as well as states, counties, and cities. It includes an annotated bibliography of programs for girls in grades K-12. $15; 40 pp.

___ **Briefs for Parents**
These sets of six articles are ready to cut and paste into your newsletter, newspaper, or periodical. Clearly and briefly, each article addresses a child development or education topic of concern to parents. They are available free (limit one copy of each set per order). To order, check the set(s) you wish to receive. Free.

___ Brief articles for a general audience of parents (English only)

___ Spanish language brief articles for parents (with English translations) 1999 edition, by Alicia Sosa

___ **Charter Schools: The Perspective from AEL's Region (1999)**
This policy brief discusses the status of charter school legislation in Kentucky, Tennessee, Virginia, and West Virginia; regional concerns for policymakers; and the effect of federal criteria on funding. The brief distinguishes between charter schools and voucher programs, describes their operation and governance, summarizes research about their effectiveness, and identifies issues policymakers must consider when framing charter school legislation. $2; 8 pp.

___ **Creating Safe Rural Schools (1999)**
In this videotape, educators who have designed and implemented safety programs at the state, district, and school levels suggest ways to create safe rural school settings. $15; 58 minutes.

___ **EdTalk: What We Know about Reading Teaching and Learning (1996)**
This publication suggests approaches to teaching minority, disabled, and limited English proficient students and offers ways to involve parents and the community. Areas covered include technology's role in reading instruction. professional development for reading teachers, and reading's relationship to other language arts and general subjects. $5; 70 pp.

___ **Expanding the Vision: New Roles for Educational Service Agencies (1998)**
Educational service agencies can serve an essential role to rural districts facing the challenges of systemic school reform, according to E. Robert Stephen The author details the forces that are shaping current expectations of rural public education and lays the groundwork for considering future possibilities for agency programs and services. $18; 172 pp.

___ **Factors Influencing the Effective Use of Technology for Teaching and Learning (1999)**
Schools and districts that want to examine and improve their technology programs can benefit from lessons learned during three years or providing technical assistance and professional development to schools. The SouthEast and Islands Regional Technology in Education Consortium (SEIR*TEC), in which AEL is a partner, also shares success stories in this booklet. (Available in PDF at http://www.ael.org/rtec/index.htm.) Free; 12pp.

___ **Family Connections Parent Notebook**
The *Family Connections* learning guides are now offered in a notebook for parents. The colorful learning guides are available in three volumes: *Family Connections 1* is for families of preschool children, *Relaciones Familiares 1* is the Spanish-language version, and *Family Connections 2* is for parents with kindergarten children. Each notebook contains a set of 30 four-page guides, plus tips for using them. $14.95 each ($11.95 without 3-ring binder).

___ **Graphing Calculators in Mathematics Grades 7—12: A Resource Guide for the Classroom and for Preservice/Inservice Training (1998)**
This resource guide offers a series of lessons covering a wide variety of mathematical concepts and topics. Planned for teachers with no experience with graphing calculators and for those who have used the instruments since their inception, these lessons emphasize hands-on, problem-solving approaches, with connections to science and the real world. $39; 250 pp.

___ **In Accord with Nature (1998)**
In Accord with Nature demonstrates how educators and youth leaders can help middle-school-age and higher level students understand and define their relationship to nature and learn the importance of protecting the environment. Alternative teaching strategies and structured activities will connect students with the natural and the built worlds. $19; 192 pp. (ISBN 1-880785-20-X).
Also by Knapp:

___ *Just Beyond the Classroom: Community Adventures for Interdisciplinary Learning* (1996). $12; 108 pp. (ISBN 1-880785-15-3)

___ *Lasting Lessons: A Teacher's Guide to Reflecting on Experience* (1992). $12; 117pp. (ISBN 1-800785-06-4)

___ **K-8: Building Blocks of Algebra (1998)**
Recent research about the human brain supports what teachers have long observed: students learn by fitting new information with what they already know. *K-8 Building Blocks for Algebra: Patterns, Functions, Relationships* provides K-8 teachers with activities that bring the real world into the mathematics classroom and help children make sense of the relationships between numbers. $18; 108 pp.

___ **Local School Improvment Council Kit (1999 revision)**
Includes an information handbook, a facilitator's manual, and a videotape that provide information and team-building activities. It can be used as a workshop for all council members or as information resources by individual members. Specific to West Virginia codes and policies. $25.

___ **1997 Native Education Directory: Organizations and Resources**

This directory includes information about national and international nongovernment organizations related to Native education; federal departments and agencies; congressional committees; periodicals; tribal college and university programs for Native language instruction and preservation, Native studies, and Native student support services; and expanded state listings. $12; 108 pp.; soft cover (ISBN 1-880785-17-X)

___ **Notes from the Field: Evolution of the Primary Program in Six Kentucky Schools. Vol. 6, No. 1 (1998)**

In this issue, researchers examine the development of the primary program in six rural Kentucky elementary schools, which they studied for eight years. This report is based on the entirety of the research, but the most detailed description comes from the 1996-97 school year, when researchers narrowed the focus of their work to the class of 2006. $2; 12 pp. plus 8-page supplement.

___ **Planning Schools to Serve Rural Communities (1998)**

This resource from AEL's Rural Center discusses the character of a good rural community school and briefly considers the relationships among learning, community, and facility construction in rural areas. Free; 8 pp.

___ **Preventing Antisocial Behavior in Disabled and At-Risk Students (1996)**

This issue of *Policy Briefs* focuses on children with ADHD and learning disabilities, presents a model that promotes prosocial behavior, and suggests considerations for preventive practice and policy making. $2; 12 pp.

___ **Reaching Out: Best Practices for Educating Mexican-Origin Children and Youth (1999)**

Harriet Romo of the University of Texas at Austin describes successful approaches to improving outcomes for this growing population of U.S. students. $24; 232 pp. (ISBN 1-880785-22-6).

___ **Recruiting and Training Volunteer Tutors of Emergent and Beginning Readers in the Primary Grades (1998)**

This manual identifies characteristics of effective tutoring programs, suggests ways to recruit tutors and select the students they'll work with, presents a model for conducting tutor training sessions, and provides activities tutors can use to help readers with comprehension, word study, and writing activities. The activities are demonstrated on the trainer's video.

___ Trainer's package (includes 90-minute video, 64-page manual, and 15 activity cards). $225.

___ Tutor's package (includes 64-page manual and 15 activity cards). $30.

___ **Rural Education Directory: Organizations and Resources (1996)**

This directory includes information about national organizations, federal government programs, state organizations, state department of education rural program coordinators, state data centers, and rural journals. $6; 65 pp.

___ **School-Based Programs to Promote Safety and Civility (1998)**

Schools are adopting antiviolence programs that, until recently, hadn't been studied for effectiveness. Now, several rigorous studies provide information to help schools and policymakers select methods that may work for them. This issue of *Policy Briefs* focuses on more than 20 primary and secondary level programs, all of which get a thumbs-up from researchers. Complete contact information is provided for each program. $2; 12 pp.

___ **Schools for Disruptive Students: A Questionable Alternative? (1998)**

Recent safe-schools legislation and commitments to provide orderly, safe learning environments have prompted states to create alternative schools for disruptive students. This issue of *Policy Briefs* reviews the research on alternative schools and suggests indicators policymakers can monitor to judge the effectiveness of alternative school legislation. $2; 8 pp.

___ **The ABC's of Parent Involvement (1998)**

The ABC's of Parent Involvement in Education: Preparing Your Child for a Lifetime of Success offers information, inspiration, ideas, and expert advice to parents with children of all ages. AEL's Family Connections staff contributed early childhood knowledge. 134 pp. Individual copies are $3.00, and a box of 50 costs $65.00, including shipping. To order, contact Linda Santrock by phone at 800-624-9120 or by e-mail at santrocl@ael.org.

AEL Information (free)

- ❑ Sample *Family Connections 1* and 2—take-home learning guides for young children
- ❑ Interdisciplinary Teamed Instruction—annual institutes that help school teams plan integrated courses, units, and lessons
- ❑ Quest—a process to help schools along the improvement journey
- ❑ QUILT—Questioning and Understanding to Improve Learning and Thinking—a nationally validated, research-based professional development program

Information Search Packages

These are excellent references for policymakers, parents, and the public. Included are reprints of articles from journals, newsletters, and periodicals; ERIC Digests; an ERIC search; and information about AEL-produced materials and other resources.

___ Block Scheduling (1996) $15; 142 pp.

___ Finding Answers to School Violence (1999) $30; 272 pp.

___ Technology in Education (1998) $15; 136 pp.

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Publications of Interest

Using Classroom Technology Effectively

The SouthEast and Islands Regional Technology in Education Consortium (SEIR◆TEC), in which AEL is a partner, recently published some lessons learned from its work with schools across its region. *Factors Influencing the Effective Use of Technology for Teaching and Learning* can help districts and schools examine and improve their technology programs.

During three years of providing technical assistance and professional development to resource-poor schools, SEIR◆TEC gathered observations and success stories that enrich this booklet. SEIR◆TEC staff agree that they can confidently share nine lessons learned.

1. Leadership is the key ingredient.
2. If you don't know where you're going, you'll end up someplace else.
3. Technology integration is a s-l-o-w process.
4. No matter how many computers are available or how much training teachers have had, there are still substantial numbers of educators who are "talking the talk" but not "walking the walk."
5. Effective use of technology requires changes in teaching; in turn, the adoption of a new teaching strategy can be a catalyst for technology integration.
6. Each school needs easy access to professionals with expertise in technology and pedagogy.
7. While many of the barriers to using technology to support learning are the same for all poor communities, some populations have additional issues.
8. In some schools, infrastructure remains a serious barrier to technology adoption.
9. Educators can benefit from tools that help them gauge the progress of technology integration over time.

To download the booklet, visit http://www.ael.org/rtec/. Print copies are available through the AEL Distribution Center (see order form/insert).

What Technology Can Deliver

What do we know about technology to date? What urgent needs can technology meet, and how should technology help us improve education? What unanswered questions should we be thinking about for the future?

These questions guide the discussion in a new policy brief from the National Center for Research on Evaluation, Standards, and Student Testing (CRESST). *Technology: Something's Coming—Something Good* takes a quick look at what we think we know, then looks at how technology might fill real needs schools will face in the future.

Internet courses and other technologies can deliver professional development to teachers and help them gain the subject skills they need.

Technology can also help educators explain complex accountability issues. To this end, CRESST and WestEd have developed a Web site that both illustrates how on-line testing works and makes the recent Third International Math and Science Study (TIMSS) accessible to everyone. It guides users through a sample 8th-grade math test, scores their results, then compares them to international averages. After completing the test, users can play math games to improve their skills and download free games to use anytime.

Try the TIMSS test at http://timssonline.cse.ucla.edu. (You'll need a plug-in called ShockWave to run it, which is available free through a link on the site.) To get copies of the policy brief, visit http://www.cse.ucla.edu or write Kim Hurst at CRESST/UCLA, 301 BSE&IS, Mailbox 951522, Los Angeles, CA 90095-1522.

Reducing School Violence

SERVE, the regional educational laboratory for the Southeast, has made its 84-page safe schools publication available in downloadable PDF format over the Internet at http://www.serve.org.

Reducing School Violence covers all major facets of violence reduction, including establishing a safe environment; creating prevention strategies; forming a crisis management and intervention policy; tracing the risk factors of violence; and implementing national, state, and local school safety initiatives. Appendixes provide sample forms and contracts, as well as reproductions of related legislation.

To order a print version, contact SERVE at 800-352-6001 or http://www.serve.org/publications. Special bulk rate pricing is available for the print version.

Book Compiles Research on School Improvement

Research You Can Use To Improve Results, a new edition of Northwest Regional Educational Laboratory's research synthesis on effective schooling practices, incorporates the findings of more than 1,400 studies and summaries.

Classrooms, schools, and districts involved in school improvement and restructuring efforts can use the synthesis to identify research-based practices related to the goals they set. The synthesis provides information on specific practices that have been shown to cultivate positive student achievement, attitudes, and social behavior. It can stimulate discussions of instructional issues, guide the development of local improvements, and aid in decision making.

Bibliographical information, selected to be both com-

(continued on page 8)

Publications of Interest

(continued from page 7)

plete and easy to find, makes it possible to explore topics as thoroughly as users desire.

Research You Can Use To Improve Results costs $27.95 for ASCD members ($34.95 for nonmembers), plus shipping and handling. To order, write ASCD, 1703 North Beauregard Street, Alexandria, VA 22311-1714, or phone 800-933-2723.

Guidance on Comprehensive School Reform

A new publication from the Mid-continent Regional Educational Laboratory (McREL) is intended to assist all schools with developing and implementing comprehensive reform initiatives. It may be especially useful to schools that are participating in the Comprehensive School Reform Demonstration program, as it's organized by chapter topics that parallel the nine criteria that were established by Congress for reform designs.

The book includes research-based information and ex-

New On-line from the U.S. Department of Education

Print versions of most publications are available from ED Pubs. Phone toll-free at 877-433-7827 or send e-mail to EDPubOrders@aspensys.com.

The Condition of Education

This publication describes the current status and recent progress of education in the United States. It features 60 indicators in five areas of education. Developing education indicators is one way the National Center for Education Statistics has participated in widening national discussion about education policies and trends. This indicator report analyzes key data that measure the health of education, monitor important developments, and show trends in major aspects of education. Unlike most other statistics, an indicator is policy relevant and problem oriented; it usually incorporates a standard against which to judge progress or regression. http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=1999022

AMERICA'S CHILDREN: Key National Indicators of Well-Being, 1999

The third annual report on the condition of America's children, released in July, was produced by the Federal Interagency Forum on Child and Family Statistics. This year's report includes a special feature: Children Who Have Difficulty Performing Everyday Activities. Below is an excerpt from the "highlights" section of the report. The full report is at http://childstats.gov/ac1999/toc.asp.

Population and Family Characteristics

- America's children continue to grow in racial and ethnic diversity. In 1998, 65% were White, non-Hispanic; 15% were Black, non-Hispanic; 15% were Hispanic; 4% were Asian/Pacific Islander; and 1% were American Indian/Alaska Native. Hispanic children slightly outnumber Black, non-Hispanic children.
- The percentage of children living with two parents declined from 77% in 1980 to 68% in 1996, and has remained stable since then. There are large differences across racial and ethnic groups, however. In 1998, 76% of white, non-Hispanic children lived with two parents, compared to 36% of Black children and 64% of Hispanic children.

Indicators of Children's Well-Being

- The poverty rate of children was at 19% in 1997, about the same as it has been since 1980. The proportion of children living in families with high income increased from 17% in 1980 to 25% in 1997, while the proportion of children living in extreme poverty grew slightly from 7% to 8% over the same period. These shifts reflect a growing income disparity among children.
- The percentage of children living with their parents who had at least one parent working full-time all year increased 5 percentage points to 76% from 1993 to 1997.
- Most American children and adolescents had a diet that was poor or needed improvement in 1996. As children get older, the quality of their diet declines: 24% of 2- to 5-year-olds had a good diet, compared with only 6% of teenagers ages 13 to 18.
- The birth rate for teenagers ages 15 to 17 dropped from 1991 to 1997, after rising during the late 1980s. In 1997, the rate was 32.1 live births per 1,000 females ages 15 to 17, down from 38.7 in 1991.
- Youth ages 12 to 17 were victims of serious violent crime at the rate of 27 crimes per 1,000 in 1997, down from 44 per 1,000 in 1993. Juveniles were identified as perpetrators of serious violent crimes at the rate of 31 crimes per 1,000 in 1997, down from 52 per 1,000 in 1993.
- A higher percentage of children were enrolled in preschool in 1997 than in 1996 — 48% compared to 45%. Preschool enrollment particularly increased among Black, non-Hispanic children, from 45% to 55%, and among children living in poverty, from 34% to 40%.
- In 1998, about 8% of the nation's 16- to 19-year-olds were neither enrolled in school nor working, a decrease from 9% in 1997.

Special Feature

- About 12% of children ages 5 to 17 have difficulty performing one or more everyday activities, including learning, communication, mobility, and self-care. Difficulty with learning is the most common limitation. Children in families with lower socioeconomic status are at greater risk than other children of having difficulty performing everyday activities.

amples of practices from schools. *Noteworthy: Perspectives on Comprehensive School Reform* can be downloaded at http://www.mcrel.org/resources/noteworthy99. For information about print copies, write McREL, 2550 S. Parker Road, Suite 500, Aurora, CO 80014-1678 or phone 303-337-0990.

Helping Teachers Improve

A new book from Rebecca Novick of Northwest Regional Educational Laboratory (NWREL) looks at the role of professional development in elementary school reform.

Effective professional development "requires time for observation, practice, reading, reflection, dialogue with colleagues, and support for these practices at the district, state, and federal levels," Novick writes. In a climate that supports true reform, "everyone involved will be both a teacher and a learner."

Novick believes that the demanding task of turning schools into learning communities will require changes at the very core of education—and of professional development. Her book synthesizes academic research, recounts education trends, shares understandings from developmental psychology, highlights promising practices, and relates the results of a survey of educators on the topic of professional development.

Actual Schools, Possible Practices: New Directions in Professional Development costs $9.15, shipping included. To order, write NWREL Document Reproduction Service, 101 S.W. Main Street, Suite 500, Portland, OR 97204-3297, phone 503-275-9519, or e-mail products@nwrel.org.

New Publications on Education Practice

These new publications are available from the Education Alliance Northeast and Islands Regional Educational Laboratory at Brown University. To order, e-mail publications@lab.brown.edu; phone 800-521-9550, ext. 321; or visit http://www.lab.brown.edu/public/pubs/pub_index.shtml.

- *Implementing Standards with English Language Learners* reviews early results of a three-year applied research project on professional development in Lowell, Massachusetts. The project focuses on culturally diverse middle schools.
- *Electronic Collaboration: A Practical Guide for Educators* is a user-friendly guide that reviews the concept of electronic collaboration, ways of collaborating, and various technologies and tools available for collaboration. It also provides an extensive listing of print and on-line resources.

Voices from the Field

(continued from page 4)

in education and might even become interested in teaching and administration as professions.

Third, informed students can serve as great liaisons and points of communication. Too often, however, the "test from above" is thrust upon students without apparent rhyme or reason. This happened with KIRIS in Kentucky and the SOLs in Virginia, for example, where many students' main base of knowledge about the tests originated with negative media attention. *Why feel motivated to perform well on the new tests,* they reasoned, *when everything being said about the tests is negative?* If you educate your students about reform issues and strategies, you can take the focus away from politics and move it toward achievement.

Lastly, when students are involved in reform, education becomes more than a diploma. In keeping with the Jeffersonian ideal, education becomes a community that generates a solid understanding of a democratic society and the role of the individual in its maintenance.

So, if you are a principal in Kentucky and are interested in learning what would keep students in-state after graduation, assemble a group and ask them. If you are a policymaker in Virginia and want to motivate students to perform on the SOLs, visit a school and ask for their ideas. If you are an administrator in Tennessee or West Virginia and want to improve school-to-work programs, sit down with the students and brainstorm. Maybe you won't find an instant remedy for the testing problem or create the blueprint for a stellar school-to-work program, but you will find students who have ideas they are ready and eager to share. By simply asking for their help, you might find a new partner in education.

Daniel M. Birdwhistell was a 1996 Kentucky Education Ambassador and has continued to work with the program, which runs through the Kentucky Governor's Scholars Program and is funded by The Partnership for Kentucky Schools. Daniel is currently a junior majoring in public policy/psychology at Washington and Lee University. This year he plans to organize an Internet forum and clearinghouse for university students majoring in education and education policy. After graduation, he plans to return to Kentucky to teach. He can be reached at birdwhistelld@wlu.edu.

We hope Voices from the Field will become a regular feature of The Link. If you'd like to contribute a column, please contact Nancy Balow by e-mail (link@ael.org) or phone 800-624-9120.

This article can help schools anticipate questions parents might ask. Sent home to parents, it can help you communicate and build trust with your community. Simply cover this area, paste your school name here, and copy these two pages.

BACK TO SCHOOL

Beyond Test Scores
How Can Parents Judge the Quality of Their Schools?

By Ron Dietel

Schools and researchers have expressed dismay with "test-score-only" evaluations of school quality for years, especially as reported in newspapers. Test scores don't give the whole picture, claimed educators. But recently, *Education Week* has reported that a number of major papers including the *Seattle Times, Detroit Free Press, Los Angeles Times,* and *Cedar Rapids Gazette* have collected comprehensive data on schools and provided the results in the form of public "report cards." A series of articles by the *Los Angeles Times,* for example, included such school quality indicators as drop-out rates, college preparatory courses taken by high school students, and numbers of children moved from bilingual programs to English-only studies.

The result of these efforts is that parents have more available information than ever to judge school quality. But with so much information comes a fair amount of confusion. There are literally hundreds of possible indicators of school quality, from achievement results and number of books in the library to teacher qualifications and levels of parent involvement. Not all are equally useful and not all are easy to measure. How do parents know which factors to use in judging the quality of their school?

"[School quality] information is most useful when you can do something about it," explain Professors Eva Baker and Robert Linn, co-directors of the National Center for Research on Evaluation, Standards, and Student Testing. When judging a school, they say it's important to focus on which factors a school has the ability to change. A school usually has little or no control over factors such as its size, its funding, or the kids who attend. But a school can control many vital educational resources and processes, i.e., teaching, professional development, and how some funds are spent at the school.

Parents should look at various school-quality processes, say researchers, such as homework assignments, textbooks, and technology acquisitions, and see if the results are contributing to positive outputs, including increased test scores, low drop-out rates, and students accepted to four-year colleges.

Student Achievement

Most indicators of school quality gain meaning when they are compared to something else. For example, parents can get an idea of how well their school is doing by comparing its test results to other schools or to overall scores at the district or state levels. Sometimes, national or even international comparisons are possible. While such comparisons are helpful, it's even more useful to compare school results across a period of years. Parents can detect trends about whether their school is improving or not. It's important to realize that small changes—a few points in test scores, for example—are probably not significant unless they create a steady pattern over three or more years.

To get a better picture of a trend, parents should look at how multiple indicators are moving overall. If more than one indicator is headed down—say, test scores, attendance rates, and parent involvement—there should be more concern than if only one indicator has dropped.

Beyond the Numbers

In examining available indicators, however, it's important to remember that simple numbers often give an incomplete picture. Take technology, for example. We have all had a tendency to use numbers of computers as a measure of school quality. But research (and common sense) suggests that how computers are used is much more meaningful to student learning. Are computers used as drilling aids and motivating time-fillers? Or are computers used to promote project-based learning, integrated into the classroom educational program and supportive of the curriculum? Student access to the Internet, and the Internet's use to supplement other school resources, also are important in judging a school's use of technology.

Qualitative Factors

Numbers alone cannot tell the full story. Different schools and classrooms have different "feels" to them. Classroom walls may be barren, posted with pictures of presidents, or filled with colorful student work. Students may be working in small groups in problem-solving activi-

ties, or sitting at desks taking notes as the teacher lectures. We all have felt the difference.

Qualitative differences don't translate easily to numbers, but they can be equally (if not more) important than numbers in judging a school's quality. Visit your own children's classrooms, those of other teachers, and—if possible—classes in other schools to get a firsthand look at any of the following qualitative factors:

1. Are students engaged in the learning process? Does the content or the skill being taught seem to be important for that grade level?
2. Are the teachers knowledgeable of the subject? Do they demonstrate flexible teaching styles for different types of content and different types of students?
3. Do samples of student work, oftentimes posted on classroom walls, in student journals, or portfolios, reflect high standards? Are there clear differences in the quality of student work between classrooms? Between schools? Or is everyone completing high-quality projects?
4. Does homework consist of basic skills work sheets, repetitive writing of sentences, or material that is not necessarily related to the present curriculum? Or is it project-based, supplementing and reviewing classroom instruction?
5. Do parents receive timely information from the school and teachers that explains the purposes of assignments and how parents can help at home?
6. Are too many topics covered just for the purpose of covering the curriculum? Or are fewer topics covered but in greater depth so that students are developing important problem-solving abilities? Results from the recent Third International Mathematics and Science Study (TIMSS) suggest that American schools try to cover too much material at the sacrifice of teaching learning skills that will help children for life.

Schools are more than just classrooms, and parents may need to talk with other parents, teachers, and administrators, or attend school-site council meetings to judge other important factors, including these:

- Have standards been developed at each grade level? Do the instruction and assessment match the standards? Is student progress clearly reported to parents and students from a variety of methods, including report cards, nationally normed multiple-choice tests, state tests (when available), and performance assessments?
- How good is school leadership? For most parents, this equates to the principal, but also can include assistant principals and even the administrative staff. Although the longevity of a principal is not a necessary indicator of success, frequent turnover often indicates a struggling school. Does the leadership have strong teaching experience? Do they communicate well with parents and teachers?
- Are parent voices heard, and does action follow? Not every suggestion from a parent is a good one, but schools should encourage parent involvement and have a process for reviewing and implementing valuable ideas.

Though they are by no means inclusive, these indicators of school quality are generally within a school's control. They serve as ways to get beyond test scores to answer the question "How good are my children's schools?"

Ron Dietel is the director of communications at the National Center for Research on Evaluation, Standards, and Student Testing (CRESST). This article was originally published in the October 1998 issue of Our Children: The National PTA Magazine, *and is reprinted with permission from CRESST. It is also available on CRESST's Web site at http://www.cse.ucla.edu/CRESST/pages/ptaron.htm.*

Resources for Parents

Here are some resources to help you get involved with your children's education. Print versions of U.S. Department of Education materials are available from ED Pubs; e-mail EDPubOrders@aspensys.com or phone toll-free at 877-433-7827.

Challenge Our Students and They Will Soar
This is the U.S. Department of Education's Web site for the America Goes Back to School program. It contains tips for parents, teachers, employers, community leaders, and students about what will help children learn. Visit http://www.ed.gov/Family/agbts.

The Compact for Reading Guide
Also from the U.S. Department of Education, this guide walks your family-school compact team through the steps of building and implementing a Compact for Reading. It provides information, strategies, examples, and checklists to help parents, educators, and community members develop effective, workable agreements that can improve your school, increase family involvement, and increase student skills and achievement in reading. Visit http://www.ed.gov/pubs/CompactforReading.

The ABC's of Parent Involvement
This 134-page book offers information, inspiration, ideas, and expert advice to parents with children of all ages. During the book's creation, AEL's Family Connections staff contributed early childhood knowledge. Individual copies are $3.00, and a box of 50 costs $65.00, shipping included. To order, contact Linda Santrock at 800-624-9120 or e-mail santrocl@ael.org.

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FAREWELL

Terry Eidell became AEL's executive director in 1973. He guided the organization for 26 years until his retirement this summer. Among the tributes to Eidell's leadership were the words of the award presented to him by the board (see right). Eidell prepared an exit report to share some parting thoughts; excerpts appear here.

As I leave AEL, uppermost in my mind are vivid memories of people whom I have come to know and love, to work for and with—it has been a great privilege; I thank you all for it.

Over the past months, I have made notes about many things, among them AEL's great strengths. I offer highlights of those reflections here.

A commitment to quality. The belief of both Board and staff that doing some things well is more productive than trying to extend the organization beyond its capacity has led AEL to a reputation for especially high-quality products and services.

A belief in educators. Even in a bygone era when "teacher-proof" products were the fad, AEL was—and remains—committed to the proposition that the wisdom gained by practitioners is as valuable as the knowledge of researchers to understanding and improving teaching and learning in our schools.

A balanced perspective. AEL clients praise our consistency in presenting all the evidence surrounding an issue, making sure that the integrity of what we say is a higher value than pandering to any particular interest.

The attitude of staff. The norm at AEL is to go above and beyond expected levels of effort to ensure that the needs and interests of clients are well served.

The AEL Board. This ever-changing, self-renewing microcosm of the region has served as a strong and reliable motivating force.

Looking to the future. For several years, I have been working with colleagues across the nation to understand how the changing economy might impact AEL's work. I feel confident that our specialized knowledge, skills, and products can be harnessed in new ways. Allen Arnold brings new visions and technologies that I believe will serve well in continuing AEL's success in the new millennium.

AEL Visionary Leadership Award
Presented to Terry L. Eidell
for outstanding achievement
and meritorious service.
The AEL Board of Directors hereby recognizes your creation of an organizational culture that fuses hope and reality, tempers knowledge with humility, and unleashes the talent and dreams of staff, benefiting young learners and the communities that nurture them.
In testimony whereof, we offer this award on behalf of all those whose lives your work has touched.

The Link

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The Link

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AEL

Linking the knowledge from research with the wisdom from practice to improve teaching and learning

Hand in Hand: Parents, Schools, and Communities Enter New Era

Benefits of Parent and Community Involvement

Research confirms that when families become partners in their children's education the results include improved student achievement, better school attendance, reduced drop-out rates, and decreased delinquency. This is true regardless of economic, racial, or cultural background.[1]

Thirty years of research also show that when families are involved in education, their children complete more homework, graduate from high school at higher rates, and are more likely to enroll in higher education than students with less family involvement.[2]

Joyce Epstein, a researcher specializing in family and community involvement in schools, says there are many other reasons for developing school, family, and community partnerships. These partnerships can improve school programs and school climate, provide families with services and support, increase parents' leadership and other skills, and help teachers with their work. But the main reason to create partnerships is to help all youngsters succeed in school and in later life. When parents, teachers, students, and others view one another as partners in education, a caring community forms around students, and their chances for success increase.[3]

School board members and school administrators agree that the main benefit of stronger ties with families and communities is increased academic achievement by students. Parent and community partnerships can help to boost achievement from preschool through high school. When involved, parents and the community will be more likely to support school reform efforts.[4]

Thomas Hatch writes that "beyond changes in curriculum or improvements in self-esteem, meaningful community engagement sets in motion a chain of events that transforms the culture of the school and, often, the community that the school serves."[5]

Challenges Facing Parents and Schools

In this era of limited resources and rising expectations, public schools may find themselves competing for allocations from a shrinking pool of resources.

(continued on page 2)

SCHOOLS, PARENTS, COMMUNITY

Hand in Hand, p. 1
Stories from School Frontiers, p. 3
Resources, p. 5

INFORMAL SCIENCE

Shhh! Don't Tell Kids It's Good for Them!, p. 7

ANNOUNCEMENTS AND INFORMATION

Equity Conference 2000; National Awards for Model Professional Development; 21st Century Community Learning Center Grants; New Book on Education Reform in Kentucky, p. 9

VOICES FROM THE FIELD

One Parent's Viewpoint, p. 10

RESEARCH NOTES

Restructuring Diverse Schools; Talent Development High Schools, p. 11
Making the Transition to School, p. 12

Serving educators in Kentucky, Tennessee, Virginia, and West Virginia since 1966

[In our] rapidly changing society, few areas are as essential to a successful future as education, both as a means of learning basic and advanced skills and as a process for helping to develop responsible, compassionate citizens who are ready to make valuable contributions to their family, community, state, and nation.

—*Strong Families, Strong Schools*, U.S. Department of Education

(continued from page 1)

When only 30 percent of the adult population in a typical community has school-age children, 70 percent of the potential voters may question cost-benefit ratios at tax time and refuse to bear an additional financial burden for the schools.[6]

David Mathews says a breakdown of the contract between the public and the public school may be one reason for such problems as dissatisfaction with the performance of the school, difficulties in communication between administrators and the public, and a lack of citizen participation.[7]

Today's families face an ongoing struggle to balance the demands of personal life with their jobs.[8] Long work hours, long commutes, and daily chores leave families little time—or energy—to participate in local schools. At the same time, there is a great need for that involvement.

Characteristics of Engagement Initiatives

According to the Annenberg Institute for School Reform, community engagement means building a collaborative constituency for change and improvement. American communities are beginning to define and shape new understandings about public engagement. Some hallmarks of healthy engagement include

- an inclusive and dialogue-driven process
- a dedication to making real improvements in schools
- a commitment to creating dynamic partnerships
- sincere efforts to find common ground
- a base of candor and mutual trust

Achieving high levels of public participation, approval, and support is not easy. When a community can create a safe space for dialogue, it can move forward into concern-driven activity. Reaching out beyond the core group builds new structures, develops and sustains leadership, and maintains momentum. This cycle supports initiatives that help the community assess and improve student achievement.[9]

Some Practical, Research-based Considerations for Community Involvement

- Thirty-five studies found that the form of parent or community involvement does not seem to be critical, so long as it is reasonably well planned, comprehensive, and long lasting.[10]
- Partnerships tend to decline unless schools and teachers work to develop and implement appropriate partnership practices at each grade level.
- Almost all teachers and administrators would like to involve families, but many do not know how to go about building positive and productive programs and are consequently fearful of trying.[11]
- Through policies and actions, schools can reach out to help parents become involved in the education of their children.
- While all forms of parent involvement are desirable, home-based parent involvement (doing home-learning activities coordinated with children's class work and providing enrichment activities) appears to be the most valuable in regard to student achievement.
- Socioeconomic status and lack of education have no effect on the willingness of parents to help their own children.[12]

Notes.

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Stories from School Frontiers

AEL's Quest project works to identify practices that support continuous school improvement. Two networks of schools—an elementary and a secondary—meet and communicate to share successes and to learn from research and one another. A Quest team within each school community provides local leadership, and each team includes parents and students as well as school staff.

The Quest journey of continuous learning and improvement is guided by a framework that begins with the articulation of core values and the creation of a shared vision. Support for the journey comes as participants engage in activities designed to broaden the learning community, share leadership, and strengthen the learning culture of the school. These activities both invite and demand the participation of parents.

Parents, teachers, and principals who have been involved in the Quest journey for three years recently put some of their reflections on paper. These true stories demonstrate how new relationships between schools and communities can be forged.

Speaking in Cursive

By Connie Allen
Principal, Natcher Elementary School, Bowling Green, KY

One spring, children's author Paul Brett Johnson gave a presentation to the Natcher Elementary student body. He detailed the entire process of producing an illustrated book for children, explaining such things as how four ink colors are layered to create the many colors in the illustrations.

Following the assembly, a teacher asked one of the kindergarten girls if she had enjoyed Mr. Johnson's talk. She replied with an enthusiastic "Oh, yes!" then went on to say, "but part of the time, you know, he was speaking in cursive."

Several times since then I've thought how often we educators "speak in cursive" to our students *and* to our parents. At Natcher, we now make special efforts to communicate in words and ways that everyone can understand.

Interview Design Process Gets Everyone Talking

By DeDe DuBose
Parent, Sewanee Elementary School, Sewanee, TN

As a person who seems always to end up on the boards of volunteer organizations, I have many times been confronted with the dilemma of representing large groups of people without knowing how they truly feel. I have been on the boards of preschools, community action groups, and, most recently, the elementary school PTO. I have been in charge of setting up meetings, discussion groups, and receptions, all in hopes of prodding parent or community involvement. My task has often been getting people to talk about things that are important to them and directions in which they want these groups to go.

Well, I have had many frustrating experiences in these situations. No matter how I arranged the room, how I posed the questions, how I encouraged participation, I have never felt that I really knew the feelings, opinions, and wisdom of those present.

Plenty of times I have been on the other side of the fence—the person sitting in the audience listening but not really speaking my thoughts—too shy, lazy, or intimidated to initiate or join a discussion.

Last fall, someone from AEL came to our school and conducted an interview design session. I was speechless! Here was something that solved every problem I had encountered with communication in groups.

Everybody contributed and everybody was comfortable. Talking in pairs allowed us to really present our thoughts, but maintained anonymity at the analysis stage. The setup gave a very casual atmosphere to the meeting, and people seemed willing to be honest. The process forced people to think about each individual question without assuming that someone else would come up with that answer. As the meeting went on, I could feel the energy level in the room rise, adding to the feelings of connectedness, power, and excitement.

I am very excited about this process as a way to achieve greater communication between parents and administrators, board members, committees, and others. It empowers the group to be heard and enables leadership to effectively progress to a desired goal. It is a powerful tool.

For a description of the Interview Design process, visit AEL's Web site at http://www.ael.org/rel/quest/process.htm.

Student-Led Conferences Attract Parents

By Earl Wiman
Principal, Alexander Elementary School, Jackson, TN

One Tuesday evening last October, seven students sat with their parents in a classroom while the teacher watched. It was time for parent-teacher conferences, and we had turned the leadership over to the students.

(continued on page 4)

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As part of our schoolwide effort to make students more autonomous and responsible learners, they prepared individual portfolios and improvement plans. Each child focused on what he or she might do to improve, and assessed how much progress had already been made.

When the children talked about their work, the parents really listened—sometimes they had no choice. One third-grade student refused to let her mother even hold the portfolio. "If I give it to you, you'll look at it instead of listening to me," she said.

What brought 521 out of 556 families to school that evening? Their children. One parent asked me for a note to take to work because "I hadn't planned on coming, but my child worried the devil out of me. So here I am."

I think it was more work than a traditional parent-teacher conference, but my teachers liked it. They saw the students become more reflective and think more about their work because they knew they were going to be sharing it with their parents. Many parents went away saying it was the best parent-teacher conference they'd ever had.

Familiarizing New Staff to the Community

By Pam Brown
Principal, Woodbridge Senior High School, Woodbridge, VA

Woodbridge Senior High School is located in the center of thousands of homes that have perfectly manicured lawns, beautiful landscaping, and luxury cars parked in the driveways. Based on the location, it's not surprising that new staff members often share a common misperception about the demographics of our student body.

As the largest 9-12 high school in the state, we have students from 54 countries. Three people—two teachers and a teacher assistant—staff our English Speakers of Other Languages center. A large segment of our population is educationally and economically disadvantaged. It is important that our staff be aware of this diversity and recognize it as an asset to our school.

Three years ago I learned of a school system that takes new teachers on a tour to familiarize them with the city. What a great idea, I thought, to take our teachers on a tour to familiarize them with the broad range of situations in which our students live and the travel situations they face coming to school each day.

Now, each August, usually on a very warm day, the assistant principal who works with our at-risk students and I board an unairconditioned school bus with our new staff members. We leave the affluent area surrounding the school and go where our students live—government subsidized housing, Navy housing, low-income housing, homeless shelters, high-crime apartment and townhouse subdivisions, and poverty-stricken neighborhoods.

We try to ensure that the academic and behavioral expectations for these students are the same as for all others. However, some students come to school each day with baggage difficult for their teachers to imagine. For them, school is a safe haven and the only stabilizing force in their lives. As adults in the building, it is our responsibility to be aware of the situations our students face and to be sensitive to their needs.

At the end of last year's new teacher tour, an individual who recently retired from the military and whose children had attended our school said in amazement, "Thank you so much. I never realized some of these areas existed in our town, much less that these students attended Woodbridge. I have worked only with the privileged through my coaching and my own children's activities. This [the tour] will be very helpful to me as I begin my teaching career."

Homework Handbook and Summer Survival Tips

By Vickie Luchuck
Teacher, Lumberport Elementary School, Lumberport, WV

I prepared a handbook of homework helps for the parents of our kindergarten to fifth-grade children. The opening section included the homework policy. I put in articles on how to help with homework and lists of materials students would need, as well as copies of correct handwriting styles, multiplication tables, maps, creative writing information, and word lists. I asked each classroom teacher to write specific suggestions for the grade levels.

The booklet gave parents what they needed to be more helpful—no longer was homework something they knew little about. Comments from parents expressed their appreciation. One mother told me she was glad that her child would no longer be able to say she had no homework. Another parent was pleased to know what his son would be expected to learn during the year.

As a follow-up to a parent's comment, I decided to offer parents a workshop on summer survival tips for their children. Since parents liked the homework handbook, I decided to use that approach with the summer handbook.

I asked teachers to give me a list of things they wanted their students to work on over the summer, both to maintain skills and to be better prepared for their new class.

I gathered some neat door prizes so that each parent received something when they attended the workshop. Their written comments told me they were glad to have both the information and the opportunity to become more involved in their children's education. ■

Resources for Schools, Parents, and Communities

Promising Initiatives to Improve Education in Your Community

U.S. Department of Education
P.O. Box 1398
Jessup, MD 20794-1398
Phone toll-free 877-4ED-Pubs
E-mail: edpubs@inet.ed.gov
Web: www.ed.gov/pubs/edpubs.html

This minicatalog includes information about resources that schools, parents, and communities can use to build partnerships to improve education. Free publications from the Department are listed in 10 sections, including helping children read well, improving teacher quality, and creating quality after-school programs. Partnerships in each area are supported by new funding programs. Single copies of all publications listed in the minicatalog are free; use contact information above to get a copy.

National School Safety Training for School and Community Personnel

NEA-EchoStar Safe Schools Network
1201 16th Street, NW
Washington, DC 20036-3290
Phone: 202-822-7746
E-mail: echostar@nea.org
Web: http://www.nea.org/issues/safescho/echostar

This national program was launched by the National Education Association (NEA), the satellite company EchoStar, and other public and private partners. The effort will include a network of satellite dishes and a comprehensive year-long instructional series for teachers, schools, and communities, including how to identify and help troubled children and other important safety issues.

In order to make sure school districts have the technology to receive the new materials, EchoStar, which is based in Littleton, Colorado, is donating satellite dishes to at least 1,000 school districts. Its partner, Future View, is donating free time for programming.

The U.S. Departments of Education, Justice, and Health and Human Services will participate in this public-private partnership by providing funding and other resources.

Beginning in January 2000, the NEA will broadcast 10 video programs, each with its own electronic discussion guide. In creating the lesson plans, the NEA has reached out to members of the Learning First Alliance as well as the Fraternal Order of Police, the American Psychological Association, and the Harvard School of Public Health. The partnership plans to transmit the training to school districts, which will then be able to distribute the material by videotape to local schools and hold hands-on training sessions with teachers, educational personnel, and community participants, including law enforcement officers.

Annenberg Institute for School Reform

Brown University, Box 19885
Providence, RI 02912
E-mail: AISR_Info@brown.edu
Web: http://www.aisr.brown.edu

The institute works for school reform and offers several resources to those interested in public engagement.

The Public Engagement Resource Center. This section of the institute's Web site offers visitors access to a wealth of information, including publications, research, links to other sites, and a bibliography on the emerging process of public engagement around public education. Visit this site to order or download the Institute's recent report, *Reasons for Hope, Voices for Change.*

Reasons for Hope, Voices for Change (available in print or on-line as a pdf document). For 18 months, the Annenberg Institute studied ways in which schools, parents, and the public organize to revitalize public education. This report incorporates information from 174 initiatives across the country and contributes to building an understanding of how American schools and communities are communicating and working together.

The print version of the report is free for one copy, $10 each for additional copies.

Public Engagement Today (available in print or on-line as a pdf document). Each issue of this newsletter focuses on one particular trend in public education that has implications for public engagement. Articles and stories from school communities present examples of promising engagement efforts.

"Schools, Parents, Community"

The Panasonic Foundation

Web: http://www.panasonic.com/MECA/foundation/foundation.html

Its mission statement says the foundation is dedicated to the enhancement and improvement of public education in the United States. To this aim, it forms long-term partnerships with school districts to help them restructure their systems. "The foundation forms a partnership with the district as a whole, including not only the superintendent, central office staff, and school board, but also unions and associations, teachers and administrators, parents, and other community partners."

The foundation newsletter, P^3 ("P-Cubed"), focuses on school-level reform issues in the Panasonic Partnership Program and other districts. Current and back issues of the newsletter are available on-line and discuss such topics as collaboration with the wider community in order to achieve equity, and a look at the Quality Improvement Process, which involves

(continued on page 6)

Resources

(continued from page 5)

external reviews conducted by parents, businesspeople, and other community members.

A Forum on the Public Schools: Manual of Instructions

Phi Delta Kappa International
P.O. Box 789
Bloomington, IN 47402-0789
Phone: 800-766-1156
E-mail: cpds@pdkintl.org

What should be the purposes of public education? How can we know if these purposes are being achieved? What changes need to be made to achieve these purposes?

Those fundamental questions guide discussion during a public forum on strengthening public schools. This manual presents a model for planning, conducting, and following up on such a forum, and includes masters of transparencies, handouts, and other materials needed during the meeting.

Schools, Parents, Community

Commonwealth Institute for Parent Leadership

Prichard Committee for Academic Excellence
P.O. Box 1658, Lexington, KY 40588
Phone: 800-928-2111
E-mail: cipl@prichardcommittee.org

Sponsored by the Prichard Committee in collaboration with the Kentucky Congress of Parents and Teachers (PTA) and the Association of Older Kentuckians, the institute seeks to create a new level of parent engagement in Kentucky schools. Each year the Institute trains 200 parents who commit to design and carry out projects that involve other parents and have a lasting impact on student achievement.

National Standards for Parent/Family Involvement

National PTA
330 N. Wabash Ave., Suite 2100
Chicago, IL 60611-3690
Phone: 312-670-6782
E-mail: info@pta.org
Web: http://www.pta.org/programs/pfistand.htm

In keeping with the establishment of standards in other areas of education, the PTA has developed national standards for family involvement. Its staff members teamed with education and parent involvement professionals through the National Coalition for Parent Involvement in Education to develop this set of standards.

The publication includes a research summary, the six standards with quality indicators for each, and sample applications for putting ideas into action. The guide is available in print and online.

National Standards for Parent/Family Involvement Programs

Standard I: Communicating
Communication between home and school is regular, two-way, and meaningful.

Standard II: Parenting
Parenting skills are promoted and supported.

Standard III: Student Learning
Parents play an integral role in assisting student learning.

Standard IV: Volunteering
Parents are welcome in the school, and their support and assistance are sought.

Standard V: School Decision Making and Advocacy
Parents are full partners in the decisions that affect children and families.

Standard VI: Collaborating with Community
Community resources are used to strengthen schools, families, and student learning.

The Educational Resources Information Center (ERIC)

Phone: 800-LET-ERIC (800-538-3742)
Web: http://www.accesseric.org

Funded by the U.S. Department of Education, ERIC makes print and electronic resources available to educators, researchers, students, parents, and the general public. This national network of education clearinghouses compiles and maintains databases and publishes a variety of print products. Among the latter are digests, full-length books, and several newsletters.

The most recent issue of *The ERIC Review* (Volume 6, Issue 2, Fall 1999) focuses on K-8 science and mathematics education through articles on many topics. Titles include

- How Can I Help My Child Become More Interested in Science?
- Calculators in the Classroom: Is the Jury Still Out?
- A Parent's Guide to Student Performance in Science and Mathematics
- Best Practices in Science Education
- Math and Science Resource Organizations

The concluding article, "Putting It All Together: An Action Plan," suggests steps that parents, teachers, school administrators, and community members can take to help students master science and mathematics.

Parent Information and Resource Centers

The U.S. Department of Education uses competitive grants to fund parent information and resource centers as part of a network that helps families and schools together support children's learning.

Nonprofit organizations collaborate with schools, institutions of higher education, social service agencies, and other nonprofits to (1) increase parents' knowledge of and confidence in child-rearing activities, (2) strengthen partnerships between parents and professionals in meeting the educational needs of preschool and school-

(continued on page 7)

Resources Available from AEL

Successful School-Home Partnerships

Parent involvement in schools is the focus of *Parents and Schools: From Visitors to Partners*, a book from the National Education Association's Restructuring Series. Edited by AEL's Rebecca Crawford Burns, it offers a recipe for creating effective partnerships and solving implementation problems that includes (1) committed leadership, (2) training for teachers and parents, and (3) a variety of involvement options for parents.

The book provides in-depth descriptions of three exemplary parent involvement programs—an early childhood school-home communication tool, a process for parents as co- decision makers and advocates at the secondary level, and an elementary home-school partnership involving parents as decision makers, teachers, and co-learners. In these chapters, readers find models for creating their own successful partnerships in descriptions of activities such as needs assessment, community-based mentoring, and parent workshops for supporting student achievement.

Some tips for effective school-home communication include emphasizing the positive; providing substantive information on what children are learning, how they are learning, and how parents can help; and being clear, concise, and jargon-free. A compilation of resources that includes printed materials, workshops, and organizations round out this practical publication.

The ABC's of Parent Involvement in Education

Decades of research show that children do better in school when their parents encourage them, show interest in their learning at home, and participate at school. This book has ideas for parents to help their children with reading, homework, using the Internet, resisting peer pressure, planning for college, and more.

Tips for parents with children of all ages come from a range of professionals and experienced parents. References to other resources will connect readers with more help and information.

Wise Families Connect with Schools

"*Family Connections* helps me have a better insight into how my child learns. The ideas introduced are easy for a child to understand and allow me to spend quality time with my child."

"*Family Connections* is a wonderful tool to involve parents with their child's learning. The simple activities reinforce skills taught in the classroom. Parents make the difference when it comes to a child's success in school, and these publications are the best I've seen."

These comments from Wise County, Virginia—the first from a parent, the second from a teacher—help to explain why the local Chamber of Commerce will again be providing AEL's *Family Connections* learning guides to all seven of the county's primary schools.

The colorful, 4-page guides contain information and activities for school and early childhood programs to send home to parents and their preschool and kindergarten-age children. The kindergarten series is available in Spanish as well as English.

A home-based version of the guides—the *Family Connections Parent Notebook*— works well for families whose children don't attend organized programs or where programs don't use the guides.

From the ERIC Clearinghouse on Rural Education and Small Schools (ERIC/CRESS)

Reaching Out to Families

A recent book by Harriett D. Romo, *Reaching Out: Best Practices for Educating Mexican-Origin Children and Youth*, considers such issues as cultural perspectives, language and literacy, gender, and changes in the Mexican American student population. It also includes a chapter on creating family-school partnerships, which describes characteristics and results of successful family involvement programs.

Romo discusses the three family variables—poverty, parents' education, and family structure—that are most often linked to student achievement. Strong support from schools for parents can overcome many barriers these variables might present. Programs that help parents understand classroom processes and behaviors can be instituted in preschool and early grades, so parents can promote good learning habits and advocate for their children.

While most Latino families value education and want their children to do well, they often don't know how to get involved. When schools provide support, they can develop trusting relationships that bring families into classrooms as well as decision-making bodies. This may involve restructuring on the part of the school, but it pays off in higher graduation and college attendance rates.

While Romo's work has been mainly with Latino and Mexican-origin students and their families, the strategies that succeed with them should succeed with other families.

See inside for ordering information.

RESOURCES AVAILABLE FROM AEL

Some documents can be downloaded from our Web site: http://www.ael.org

___ **A Guide to Gender Fair Education in Science and Mathematics (1998)**
This publication presents information gathered from the research and programs developed by hundreds of teachers and researchers in the field of educational equity. The activities highlighted are examples of programs supported by the U.S. Department of Education and National Science Foundation, as well as states, counties, and cities. It includes an annotated bibliography of programs for girls in grades K-12. $15; 40 pp.

___ **Briefs for Parents**
These sets of six articles are ready to cut and paste into your newsletter, newspaper, or periodical. Clearly and briefly, each article addresses a child development or education topic of concern to parents. They are available free (limit one copy of each set per order). To order. check the set(s) you wish to receive. Free.

___ Brief articles for a general audience of parents (English only)

___ Spanish language brief articles for parents (with English translations) 1999 edition, by Alicia Sosa

___ **Charter Schools: The Perspective from AEL's Region (1999)**
This policy brief discusses the status of charter school legislation in Kentucky, Tennessee, Virginia, and West Virginia; regional concerns for policymakers; and the effect of federal criteria on funding. The brief distinguishes between charter schools and voucher programs, describes their operation and governance, summarizes research about their effectiveness, and identifies issues policymakers must consider when framing charter school legislation. $2, 8 pp.

___ **Creating Safe Rural Schools (1999)**
In this videotape, educators who have designed and implemented safety programs at the state, district, and school levels suggest ways to create safe rural school settings. $15; 58 minutes.

___ **EdTalk: What We Know about Reading Teaching and Learning (1996)**
This publication suggests approaches to teaching minority, disabled, and limited English proficient students and offers ways to involve parents and the community. Areas covered include technology's role in reading instruction, professional development, and reading's relationship to other language arts and general subjects. $5; 70 pp.

___ **Expanding the Vision: New Roles for Educational Service Agencies (1998)**
Educational service agencies can serve an essential role to rural districts facing the challenges of systemic school reform, according to E. Robert Stephen The author details the forces that are shaping current expectations of rural public education and lays the groundwork for considering future possibilities for agency programs and services. $18; 172 pp.

___ **Factors Influencing the Effective Use of Technology for Teaching and Learning (1999)**
Schools and districts that want to examine and improve their technology programs can benefit from lessons learned during three years or providing technical assistance and professional development to schools. The SouthEast and Islands Regional Technology in Education Consortium (SEIR*TEC), in which AEL is a partner, also shares success stories in this booklet. (Available in pdf at http://www.ael.org/rtec/index.htm.) Free; 12pp.

___ **Family Connections Parent Notebook**
The *Family Connections* learning guides are now offered in a notebook for parents. The colorful learning guides are available in three volumes: *Family Connections 1* is for families of preschool children, *Relaciones Familiares 1* is the Spanish-language version, and *Family Connections 2* is for parents with kindergarten children. Each notebook contains a set of 30 four-page guides, plus tips for using them. $14.95 each ($11.95 without 3-ring binder).

___ **Graphing Calculators in Mathematics Grades 7—12: A Resource Guide for the Classroom and for Preservice/Inservice Training (1998)**
This resource guide offers a series of lessons covering a wide variety of mathematical concepts and topics. Planned for teachers with no experience with graphing calculators and for those who have used the instruments since their inception, these lessons emphasize hands-on, problem-solving approaches, with connections to science and the real world. $39; 250 pp.

___ **In Accord with Nature (1998)**
In Accord with Nature demonstrates how educators and youth leaders can help middle-school-age and higher level students understand and define their relationship to nature and learn the importance of protecting the environment. Alternative teaching strategies and structured activities will connect students with the natural and the built worlds. $19; 192 pp. (ISBN 1-880785-20-X).

___ **K-8: Building Blocks of Algebra (1998)**
Recent research about the human brain supports what teachers have long observed: students learn by fitting new information with what they already know. *K-8 Building Blocks for Algebra: Patterns, Functions, Relationships* provides K-8 teachers with activities that bring the real world into the mathematics classroom and help children make sense of the relationships between numbers. $18; 108 pp.

___ **Local School Improvment Council Kit (1999 revision)**
Includes an information handbook, a facilitator's manual, and a videotape that provide information and team-building activities. It can be used as a workshop for all council members or as information resources by individual members. Specific to West Virginia codes and policies. $25.

___ **Next Steps: Research and Practice to Advance Indian Education (1998)**
Editors Karen Gayton Swisher and John W. Tippeconnic III asked a dozen indigenous scholars and practitioners to help answer such questions as What is "Indian education" today? and How will it look in the future? The essays they

received help readers explore the issues that face educators who work with indigenous students. $28; 317 pp. (ISBN 1-880785-21-8).

___ **Notes from the Field: Evolution of the Primary Program in Six Kentucky Schools. Vol. 6, No. 1 (1998)**

In this issue, researchers examine the development of the primary program in six rural Kentucky elementary schools, which they studied for eight years. This report is based on the entirety of the research, but the most detailed description comes from the 1996-97 school year, when researchers narrowed the focus of their work to the class of 2006. $2: 12 pp. plus 8-page supplement.

___ **Parents and Schools: From Visitors to Partners (1993)**

This book, edited by AEL's Rebecca Crawford Burns, describes three exemplary parent involvement programs, offers tips on school-home communication, and includes more than 100 resources for parent involvement. Also available through the National Education Association by phone at 800-229-4200. $11.95, 105 pp.

___ Planning Schools to Serve Rural Communities (1998)

This resource from AEL's Rural Center discusses the character of a good rural community school and briefly considers the relationships among learning, community, and facility construction in rural areas. Free; 8 pp.

___ **Preventing Antisocial Behavior in Disabled and At-Risk Students (1996)**

This issue of *Policy Briefs* focuses on children with ADHD and learning disabilities, presents a model that promotes prosocial behavior, and suggests considerations for preventive practice and policy making. $2; 12 pp.

___ **Reaching Out: Best Practices for Educating Mexican-Origin Children and Youth (1999)**

Harriet Romo of the University of Texas at Austin describes successful approaches to improving outcomes for this growing population of U.S. students. $24; 232 pp. (ISBN 1-880785-22-6).

___ **Recruiting and Training Volunteer Tutors of Emergent and Beginning Readers in the Primary Grades (1998)**

This manual identifies characteristics of effective tutoring programs, suggests ways to recruit tutors and select the students they'll work with, presents a model for conducting tutor training sessions, and provides activities tutors can use to help readers with comprehension, word study, and writing activities. The activities are demonstrated on the trainer's video.

___ Trainer's package (includes 90-minute video, 64-page manual, and 15 activity cards). $225. Product number D98-009-L173.

___ Tutor's package (includes 64-page manual and 15 activity cards). $30.

___ **Rural Education Directory: Organizations and Resources (1996)**

This directory includes information about national organizations, federal government programs, state organizations, state department of education rural program coordinators, state data centers, and rural journals. $6: 65 pp.

___ **School-Based Programs to Promote Safety and Civility (1998)**

Schools are adopting antiviolence programs that, until recently, hadn't been studied for effectiveness. Now, several rigorous studies provide information to help schools and policymakers select methods that may work for them. This issue of *Policy Briefs* focuses on more than 20 primary and secondary level programs, all of which get a thumbs-up from researchers. Complete contact information is provided for each program. $2; 12 pp.

___ **Schools for Disruptive Students: A Questionable Alternative? (1998)**

Recent safe-schools legislation and commitments to provide safe learning environments have prompted states to create alternative schools for disruptive students. This issue of *Policy Briefs* reviews research and suggests indicators policymakers can monitor to judge the effectiveness of alternative school legislation. $2; 8 pp.

___ **The ABC's of Parent Involvement (1998)**

The ABC's of Parent Involvement in Education: Preparing Your Child for a Lifetime of Success offers information, inspiration, ideas, and expert advice to parents with children of all ages. AEL's Family Connections staff contributed early childhood knowledge. 134 pp. Individual copies are $3.00, and a box of 50 costs $65.00, including shipping.

AEL Information (free)

- ❑ Sample *Family Connections 1* and *2*—take-home learning guides for young children
- ❑ Interdisciplinary Teamed Instruction—annual institutes that help school teams plan integrated courses, units, and lessons
- ❑ Quest—a process to help schools along the improvement journey
- ❑ QUILT—Questioning and Understanding to Improve Learning and Thinking—a nationally validated, research-based professional development program

Information Search Packages

These are excellent references for policymakers, parents, and the public. Included are reprints of articles from journals, newsletters, and periodicals; ERIC Digests; an ERIC search; and information about AEL-produced materials and other resources.

___ Block Scheduling (1996) $15; 142 pp.

___ Finding Answers to School Violence (1999) $30; 272 pp.

___ Technology in Education (1998) $15; 136 pp.

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Resources

(continued from page 6)

aged children. and (3) enhance the developmental progress of children.

The centers share a common objective to initiate or expand opportunities for parents to be involved in their children's learning. but they have designed their outreach strategies and services to emphasize local priorities and conditions.

All centers provide information and training through either the Home Instruction Program for Preschool Youngsters (HIPPY) or the Parents As Teachers (PAT) program. Both are widely replicated, home-based models that have proven to be highly effective in helping parents prepare their children for school success.

AEL Region Parent Information and Resource Centers

Tennessee Parents First Information and Resource Center
Tracy Patton
Phone: 615-460-9810 or toll-free at 877-TN-READS
E-mail: parent1@aol.com

Kentucky Parent Information and Resource Center
Ann Hendrix
Phone: 800-327-5196
E-mail: ahendrix@kih.net

Virginia Parental Information and Resource Center
Lorraine Flood
Phone: 757-441-2045
E-mail: lflood@vpirc.net

West Virginia Family Connections
James Shaffer
Phone: 304-296-1655 or 800-814-5534
E-mail: info@wvfamilyconnections.org

INFORMAL SCIENCE

Shhh! Don't Tell Kids It's Good for Them!

By Carla Thomas McClure

On a cool spring morning, several yellow buses pull up in front of the Good Zoo in Wheeling, West Virginia. Eager children press their faces against the windows. When the doors swing open, each child emerges with a parent, grandparent, or another family member. All wear name tags with animal drawings on them. The day's activities will look and feel much like an ordinary field trip to the zoo—but watch closely and you'll see evidence that more planning and preparation than usual have gone into the visit. Teachers and zoo staff have been collaborating to make this informal science experience both fun and educational.

Informal science is a term some educators use to describe science learning that takes place outside the classroom. Zoos, museums, and national parks are examples of informal science sites. For the past three years, the Eisenhower Regional Consortium for Mathematics and Science Education at AEL has been helping informal science site staff and local teachers work together to develop innovative activities that build on students' natural curiosity.

"A guide for teachers was something we had been thinking about for a long time," said Gretchen Henrich at the Good Zoo. "So when AEL offered to help us connect with teachers to do that, we seized the day. Together, we've created activities for kids to do before, during, and after their visit here. They're trying out the habitats activity today."

Lewis hurries downstairs to one of two indoor classrooms where the visitors are seated. "I want you to meet Sweetness," she tells her audience as she pulls a skunk from a carrier box. Small hands reach out to pet the animals Lewis shows the children as she talks about the places where animals naturally live. "Look at the animal drawing you've colored on your name tag," she instructs them as they leave the room. "Look for that animal during your visit today and notice what kind of habitat the animal is in."

A zoo scavenger hunt keeps minds and feet active after lunch. The adult family member accompanying each child is kept busy with questions and listens as the child explains what he or she already knows about zoo animals. "She's been coming home from school every day talking about animals," a parent comments. "She got her stuff all packed last night." Later, back in the classroom, each student will get a set of animal drawings to color, cut out, and place in suitable "habitats" (decorated folders).

Project Sites

Kentucky Caverns, Horse Cave, Kentucky
Challenger Learning Center, Hazard, Kentucky
Memphis Botanic Garden, Tennessee
Nashville Zoo, Tennessee
Virginia Marine Science Museum, Virginia Beach, Virginia
Oglebay's Good Zoo, Wheeling, West Virginia

Those collaborating to develop informal science activities for young zoo visitors intentionally designed pre-visit and post-visit activities to make the experience more meaningful. Including family members in the zoo visit was the teachers' idea. There are several advantages to including them, according to AEL's Monica Mitchell Ulewicz. "When family members are involved, kids get individual attention. The learning activities give parents a chance to observe special interests or abilities in a child that they might not have observed otherwise. Adults

(continued on page 8)

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Informal Science

(continued from page 7)

who spend time doing learning activities with kids send messages that the child is important, that education is important, and that learning can be fun. Involving parents in field trips or class activities is only one way to accomplish this. Post-visit activities can be designed to involve parents, too."

"Sometimes parents and even school systems look at field trips as expensive play times. What we tend to forget is that children learn through play," says Ulewicz. "The best informal science activities often look like play but are designed with a learning goal in mind."

One way to keep learning goals in the forefront is to correlate activities with national and state science and math standards.

Activities are also designed to appeal to various learning styles. A teacher who brought her students to the Memphis Botanic Gardens commented that even the students with attention deficit disorder paid attention and participated. Informal science experiences often capture student interest by taking them out of traditional classroom roles and settings, engaging the five senses, and attending to social and individual needs. Follow-up activities provide the time and structure for students to reflect on their experiences—an essential part of the learning process. Students might discuss the experience, write about it, look at or draw pictures, create something with their hands, or play a game.

"Another thing informal science does is to make students and their families aware of community resources," says Ulewicz. Of course, not every school has a nearby zoo, aquarium, nature park, or museum. But most communities do have people with personal or professional interests in areas related to science. Many of these people would be pleased to act as resident experts and tour guides during field trips to local farms, orchards, greenhouses, rivers, or other sites. This approach offers the added advantage of introducing students to veterinarians, pharmacists, researchers, farmers, and others involved in science-related careers in their own community.

If no local science center exists, students might design an informal community science center (either temporary or permanent) as a class project. "Students can come up with some wonderful ideas," says Ulewicz. "A few years ago, I was involved in a small museum that asked community members for ideas about exhibits. Believe it or not, the group expressed interest in seeing a display showing what happened to sewage after it was flushed. They did some research, then met to brainstorm ideas that would appeal to young people. A student popped up with, 'I know! I want to be flushed down a giant toilet!' The 3-D display they created was the most popular one at the museum. The kids entered one end of this big tube structure (after "flushing" the toilet and hearing the sound effect) and walked through the system. The planners would never have thought of something like that if they hadn't had a student involved."

Success stories like this motivate informal science site staff and local teachers to involve students as they design meaningful learning experiences. "The Consortium invites all the sites we work with to send staff and teachers to a yearly regional conference to share ideas," Ulewicz explains. "This year, we'll also do focus groups with students to get their ideas for making activities even better."

"Making students more aware of the real world, having them interact with real animals, places, people, and artifacts, and using that interaction to spark curiosity and a love for learning—that's what informal science is all about," says Ulewicz. "Dedicated teachers and site staff around the region are working together to make it happen." ■

For more about informal science and the Consortium's project, visit http://www.ael.org/eisen/fyi/informal.htm.

Informal Science Resources for Educators and Parents

"Informal Mathematics and Science Education"
This theme issue of *ENC Focus* from the Eisenhower National Clearinghouse for Mathematics and Science Education includes articles and ideas for conducting informal science activities at national parks, zoos, aquariums, amusement parks, museums, and science centers. Available at http://www.enc.org/classroom/focus/133280/index.htm or call 614-292-7784.

Helping Your Child Learn Science
This booklet from the U.S. Department of Education contains instructions for simple science activities children can do at home (make a soap-powered paper boat) and in the community (play guessing games at the zoo). Available at http://www.ed.gov/pubs/parents/Science/index.html.

Museums and Learning: A Guide for Family Visits
This booklet suggests things families can do before, during, and after a museum visit to help children get the most out of it. Available at http://www.ed.gov/pubs/Museum/.

Just Beyond the Classroom
Educator Clifford E. Knapp offers outdoor activities, reflection questions, and assessment ideas for teachers in urban and rural communities. Available for $12 from the ERIC Clearinghouse on Rural Education and Small Schools, phone 800-624-9120.

Announcements and Information

Plan Now for Equity Conference 2000

Educators, administrators, and parents are invited to attend this conference sponsored by the Eisenhower Math and Science Consortium and The Region IV Comprehensive Center at AEL. Dates are May 17-19; the location is Lexington, Kentucky; and more information will be available after January 3, 2000, at http://www.ael.org. Many sessions will be of interest to parents, and some will be created specifically for an outside-school audience.

For more information, contact Janis Augustine at AEL. Phone 800-624-9120 or e-mail augustij@ael.org.

National Awards for Model Professional Development

The National Awards Program of the U.S. Department of Education recognizes schools and school districts with model professional development activities in the pre-kindergarten through 12th-grade levels that have led to increases in student achievement.

Application Deadline: January 18, 2000
Funds Available: None, but the Department intends to pay the costs of having successful applicants make presentations on their professional development activities at regional and national conferences.

This program began in 1996, in coordination with a wide range of national education organizations, to highlight and recognize schools and school districts whose professional development activities are well aligned with the Department's statement of the Mission and Principles of Professional Development.

In the first three years of the program, the Secretary has recognized 20 schools and school districts in 12 states. Moreover, the program has helped educators learn how teachers and others in these sites have succeeded in implementing high-quality professional development activities, and what educators in other locations can do to better evaluate the effectiveness of their own professional development efforts.

Complete information on this competition can be found at http://www.ed.gov/inits/TeachersWeb. You may also contact Sharon Horn, Office of Educational Research and Improvement, 555 New Jersey Ave., NW, Room 506E, Washington, DC 20208; phone 202-219-2203; e-mail sharon_horn@ed.gov.

21st Century Community Learning Center Grants

When Congress established the 21st Century Community Learning Centers program, it envisioned rural and inner-city schools collaborating with community members, public and nonprofit agencies and organizations, local businesses, other educational entities, and community recreational, cultural, and human service groups. By focusing some part of their energies and resources on joint projects to benefit the educational, health, social services, cultural, and recreational needs of local families, they might power a new sense of community to support lifelong learning for children and adults alike.

To be funded, a Community Learning Center must operate within a public elementary, middle, or secondary school building, and it must provide programs for residents of all ages. Its priority must be to offer activities that expand learning opportunities for the children and youth of the community.

Many components may be included in a proposal; among them are tutoring and homework assistance, nutrition and health programs, expanded library service hours, parenting skills education, recreational and cultural programs, employment counseling, and technology education programs for individuals of all ages.

Although funding for the next round of grants has yet to be appropriated, deadlines will likely be similar to those for last year. Approximate time frame:

Applications available: early December 1999
Application deadline: March 1
Estimated award date: May 30

For more information on the program, visit the U.S. Department of Education Web site (http://www.ed.gov/offices/OERI/21stCCLC). You'll find grant application forms and advice on preparing a strong proposal (see the Frequently Asked Questions section). AEL will be happy to provide review and support to school districts preparing proposals. Contact Jane Hange by e-mail at hangej@ael.org or by phone at 800-624-9120. (For examples of successful programs, see the Fall 1999 issue of *The Link* at http://www.ael.org.)

New Book on Education Reform in Kentucky

In 1986, 66 mostly rural Kentucky school districts filed a lawsuit against the state in hopes of gaining more equitable and adequate funding for public schools. In 1989, the Kentucky Supreme Court decided that the entire system of public education should be replaced. The court gave the legislature until the end of its next session to complete legislation creating an entirely new system.

What we now know as KERA, the

(continued on page 10)

Kentucky Book

(continued from page 9)

Kentucky Education Reform Act of 1990, began life as House Bill 940. The story of writing, enacting, and implementing KERA fills the pages of Jack D. Foster's book, *Redesigning Public Education: The Kentucky Experience.* Foster was Kentucky's Secretary of the Education and Humanities Cabinet from 1988-91 and played a major role in KERA's creation.

Following his service at the state level, Foster helped more than 50 Kentucky schools implement KERA. He gained insights and experience at the school level that also contributed to his observations in this book.

For nearly a decade educators have been watching and learning from Kentucky's experiences with school reform, hoping for guidance on their own research-based improvements. Jack Foster provides invaluable help with his authoritative descriptions of the policy assumptions on which KERA was based and his critique of what went right—and wrong—during implementation.

Redesigning Public Education can be ordered from Diversified Services, Inc., 2265 Harrodsburg Road, Suite 200, Lexington. KY 40504-3517; phone 606-278-5700; fax 606-278-6182. ISBN 0-9631007-1-8; 273 pp.; paperback, $22; hardback, $28; shipping and handling, $3 plus $0.95 per book.

Look also this year for reports from AEL's 10-year study of KERA implementation in four school districts. As reports become available, they will be announced in *The Link* and on AEL's Web site.

VOICES FROM THE FIELD

One Parent's Viewpoint

By Barbara McFall

Parents, students, teachers, administrators, and community leaders share a common goal in education: All want to fit future citizens for the life that they are growing into. Motivations differ, however.

Students and their parents want the best possible life for themselves and for their loved ones. Their concern is with the individual growth and development of a unique and wonderful learner. That learner is on a singular quest to realize personal hopes, dreams, visions, goals, and objectives. Education succeeds if the learner is joyfully engaged and achieving or expanding his or her full potential.

Community leaders and policymakers have a somewhat different motivation. Their task is to maintain a well functioning society for all. In America, this has traditionally meant providing a homogeneous educational experience in order to create common ground in a country of immigrants. The intent has been to raise the average level of performance and to identify skills to be applied in community efforts.

Teachers and administrators are called to work the middle ground, to mediate the needs both of individuals and society, then facilitate a solution that benefits both.

Some policies, such as the standards-based reform movement, present dilemmas for everyone.

Virginia recently implemented Standards of Learning (SOLs) and standardized testing of SOLs. While such standards go a long way to ensure that all students have equal access to educational excellence, they also command a significant portion of student and teacher attention.

As a parent, I see educators' concerns for the welfare and progress of my children, their students. I also recognize their mandate to achieve certain community goals, which may not be negotiable.

However, I am concerned that the very talents that make my son unique and wonderful will be crowded out by other demands. I feel that creativity and a strong work ethic will serve him better in the long run than specific recall of historic facts or figures. It's not that I don't want him exposed to a broad range of excellent educational opportunities. It's just that I want to leave room for other growth and development. I want him to learn to lead as well as follow, to create as well as understand, to value where we have been as a community and push the boundaries when change is necessary. I want him to be the best that he can possibly be, and to be joyful in his contribution to society.

So I pressure my son's school and teachers. If I seem strident and demanding, if my presence complicates your day, please remember that my job is to be an advocate and mentor. We have the same goals. Our vision and our values may differ. Our task is to learn to share, for me to understand your path and expectations, and for you to understand mine. Together we can help this learner find his place in society and achieve a happy and productive life. ■

Barbara McFall is the parent of a high school student and lives in Roanoke, Virginia. She can be reached at barbmcfall@aol.com..

Voices from the Field presents an opportunity to become acquainted with the views of education-minded persons in the AEL region. If you have thoughts on issues that concern our readers, please send queries by mail to Link Editor, AEL, Inc., P.O. Box 1348, Charleston, WV 25325-1348 or send e-mail to link@ael.org. Contributions may be edited for length and clarity of focus.

Research Notes

The U.S. Department of Education's Office of Educational Research and Improvement funds research through regional laboratories, national centers, and field studies. The following are summaries of recent reports. Information on finding the complete text includes a Web address (for downloading) as well as contact information for obtaining print copies.

Restructuring Diverse Schools

From the Center for Research on Education, Diversity and Excellence (CREDE)

Two of the most rapidly developing fields in education research are diversity education and school restructuring/school reform. In order to answer the question *Are some of the current school restructuring models better suited to multilingual, multicultural contexts than others?* CREDE has been studying 13 diverse schools that are in the process of implementing an externally developed school restructuring design.

Based on preliminary findings, researchers have identified some characteristics that may make for successful restructuring in multilingual, multicultural school contexts:

- If a model is going to work, the process needs to include ample opportunity for staff to make educated selection and implementation choices.
- Multidimensional support and leadership are required from design teams, district and state personnel, and school site educators to ensure success. For example, state department of education policies regarding student assessment and curriculum standards need to be aligned to support school restructuring plans.
- Educators must ensure that all students receive the benefits of the adopted reform designs and that high standards are universally maintained. This is especially the case for districtwide reforms.
- Successful implementation of school restructuring designs requires sensitivity and adaptability on the part of the design developers, local policymakers, and educators in schools.

In sum, every effort should be made by school districts and design teams to assist school educators in choosing the right design for their school, in adapting the design to their local context, and in implementing that design.

Stringfield, S.; Datnow, A.; and Ross, S.M. (1998). "Scaling Up School Restructuring in Multicultural, Multilingual Contexts: Early Observations From Sunland County." Research Report #2, CREDE. Visit http://www.crede.ucsc.edu, e-mail crede@cats.ucsc.edu, or phone 831-459-3500.

Talent Development High Schools

From the Center for Research on the Education of Students Placed At Risk (CRESPAR)

The Talent Development High School model focuses on turning comprehensive high schools into places that address needs that research has shown to be common to all students. For example, students need to know the relevance of their schoolwork, and to experience a caring and supportive environment, including having help with personal problems and opportunities for academic success.

The Talent Development model includes a self-contained academy for 9th graders, and separate career-oriented academies for 10th-12th graders. A common core curriculum with high standards and a college-bound orientation apply throughout. Instruction is in 90-minute periods. Intensive ongoing professional development is provided.

Currently in its fourth year of development, the flagship site is Patterson High School in Baltimore, a comprehensive high school formerly on the Maryland Reconstitution list. The model is also being implemented in Southwestern High School, and leaders in the Baltimore system asked that the model be introduced in all Baltimore high schools.

Analyses of third-year data for Patterson High School continue to show positive effects from the reforms.

Attendance has increased by 10% for the entire school and 15% for the 9th grade over the 3-year period, compared to a decline of 3% for the rest of the district in both the 9th grade and overall for the same period.

Promotion rates increased significantly and dropouts decreased to produce nearly double the number of students reaching the junior year compared to before the reforms. If these students persist through the senior year as the first graduating class from the Talent Development Model, the dropout rate will have been reduced by half.

The percentage of 9th graders who passed the Maryland State Functional Exams increased from 28% to 56% in math and from 44% to 57% in writing, placing Patterson near the top of the district's non-selective high schools.

McPartland, James; Balfanz, Robert; Jordan, Will; and Letgers, Nettie. "Improving Climate and Achievement in a Troubled Urban High School Through the Talent Development Model." *Journal of Education for Students Placed At Risk*, 3(4), 337-361 (1998). Visit http://crespar.law.howard.edu or phone 410-516-8800.

(continued on page 12)

Research Notes

(continued from page 11)

Making the Transition to School

From the National Center for Early Development and Learning (NCEDL)

The Center developed a paper based on a national survey of kindergarten teachers. It reveals four key points that are vital for teacher practices and transitions to school.

Use of some form of practice to help children make the transition to kindergarten is nearly universal; 95% of the nation's kindergarten teachers endorsed the most frequently reported practice—talking with the child's parent after school starts.

Practices that involve school personnel in direct contacts with children or families are the least frequently reported, as are practices that involve contact with children or families before the start of school and/or involve low-intensity generic contact (e.g., flyers, brochures, group open houses).

As schools (or districts) become increasingly urban and have higher percentages of minority and/or students from low socioeconomic backgrounds, personal contacts with children and families before the start of school become less frequent (except for home visits), and low intensity, after-the-start-of-school contacts (such as flyers) are more common. Thus, children and families who may need the best form of transition practices are least likely to receive them.

Teachers identify a number of barriers to implementing practices. The most common are that class lists are generated too late to make contacts with families before school starts, summer work is not supported, and no plan for the transition to kindergarten is available in the school district. Teachers' perceptions that family characteristics are barriers occur with increasing frequency as schools become more urban, have a higher minority population, or are located in high poverty districts.

Pianta, Robert C.; Cox, Martha J.; Taylor, Lorraine; and Early, Diane. "Transition Practices, Spotlight No. 1A Jan 1999," excerpts from paper, "Kindergarten Teachers' Practices Related to Transition to School: Results of a National Survey," published in *Elementary School Journal.* National Center for Early Development & Learning: January 1999. Visit http://www.ncedl.org, e-mail loyd_little@unc.edu. or phone 919-966-0867.

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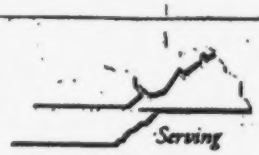

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Technology in the Classroom: Evolutionary Changes

Most of today's teachers attended school when "instructional technology" meant a blackboard, chalk, paper and pencil, and maybe a film projector. Today's schools employ a wide array of technology tools, including televisions, video cameras, graphing calculators, and computers and their peripherals—digital cameras, scanners, probeware, and more.

As more teachers and students gain access to these tools, educators' concerns shift to how to integrate technology into instruction and how to tell whether their efforts are effective in helping students learn. Experience tells us this large task won't happen overnight.

Defining Effective Integration and Use

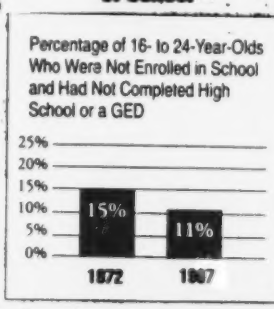
Studies of the Apple Classrooms of Tomorrow, an early computer-intensive project, defined five evolutionary stages of technology integration:

1. **Entry.** Teachers learn the fundamentals of new technology, including the basic configurations of hardware and software.
2. **Adoption.** Teachers begin to use technology to support traditional instruction.
3. **Adaptation.** Teachers integrate technology into existing classroom activities and emphasize productivity.
4. **Appropriation.** Teachers begin to develop new approaches to teaching and learning. Their skill levels allow them to take advantage of technology to create new activities.
5. **Innovation.** Teachers stop trying to adapt instruction to technology and reflect on the actual craft of teaching. They adjust their fundamental perception and delivery of instruction.[1]

A recent review of the research on instructional technology by staff at North Central Regional Educational Laboratory defined a similar, three-phased progression:[2]

(continued on page 2)

Fewer Students Are Dropping Out of School



See Page 6 for "Good News about American Education"

IN THIS ISSUE

Technology in the Classroom
Evolutionary Changes, p. 1

Comprehensive School Reform
Formative Evaluation: Keeping Comprehensive School Reform on Track, p. 4

Research Notes
Reforming Low-Performing Schools, p. 5

Report
Good News About American Education, p. 6

Announcements: Training Opportunities
QUILT Training; Summer Curriculum Institute; Equity Conference 2000; Teacher Workshops, p. 6

Grant Opportunities
Federal, Foundation, and More, p. 8

Publications of Interest
Making Standards Understandable; Making Instruction Better; Workplace Learning; Teaching Language Literacy in Diverse Settings; TQM and School Reform; classrooms@work, p. 10

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67

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Technology

(continued from page 1)

1. Print Automation. Instruction is characterized by the use of software that relies heavily on drill-and-practice to teach segmented content and/or skills.

2. Expansion of Learning Opportunities. Computers become tools for learner-centered practices and help teachers move from isolated learning activities to applications that involve working in groups.

3. Data-Driven Virtual Learning. More sophisticated data-driven decision making carries the expectation of making schools more effective. Teachers and students all have access to the data and use it to meet accountability standards.

These studies reveal that, as teachers become more proficient with technology, they become more adept at helping students take control of their own learning. Problem solving and higher order thinking, information sifting and analysis, time management, and the ability to prioritize tasks—skills that can spell success in a fast-paced, information-based global society—are developed as teachers and students use technology effectively.

Evaluating Effectiveness

As more education dollars go to instructional technology, more attention is being given to evaluating its effectiveness in the classroom.

At the July 1999 U.S. secretary's conference "Evaluating the Effectiveness of Technology," seven critical issues of evaluation were identified:

- The effectiveness of technology is embedded in the effectiveness of other school improvement efforts.
- Current practices for evaluating the impact of technology in education need broadening.
- Standardized test scores offer limited information to drive the development of a school's technology program. Most

(continued on page 3)

Notes: Technology in the Classroom

1. David C. Dwyer, Cathy Ringstaff, and Judy H. Sandholtz, "Changes in Teachers' Beliefs and Practices in Technology-rich Classrooms," *Educational Leadership*, 48(8): 45-52 (1991).
2. Gilbert Valdez, Mary McNabb, Mary Foertsch, Mary Anderson, Mark Hawkes, and Lenaya Raack, *Computer-Based Technology and Learning: Evolving Uses and Expectations* (Oak Brook, IL: North Central Regional Educational Laboratory, 1999). http://www.ncrel.org/tplan/cbtl/toc.htm/ (4 February 2000).
3. Mary McNabb, Mark Hawkes, Ullik Rouk, *Critical Issues in Evaluating the Effectiveness of Technology* (Washington, DC: U.S. Department of Education, 1999). http://www.ed.gov/Technology/TechConf/1999/confsum.html/ (7 February 2000). Thirteen papers were prepared for the conference; they, the conference summary, stories from schools, and other information are available online. Visit the conference Web site at http://www.ed.gov/Technology/TechConf/1999/index.html.
4. Steve Cohen and Barbara McMullen, "Shifts in Thinking: A Primer on the Foundations of Instructional Technology Assessment," *Syllabus* 13(6): 12-14 (2000).
5. See note 4 above.
6. See note 4 above.

For More About Technology Integration and Evaluation

Erik Fatemi. Technology Counts '99. Building the Digital Curriculum: Summary. *Education Week*. http://www.edweek.org/sreports/tc99/articles/summary.htm/ (27 January 2000).

Melissa Groves, Michele Jarnigan, and Kendra Eller. "But How Do We Use It?" Discovering Hidden Barriers and Unexpected Successes in Integrating Computers in a Preschool Curriculum. *Proceedings of the Families, Technology, and Education Conference*, 57-61, 1998. ERIC Document Reproduction Service No. ED 424 998.

John Schacter. The Impact of Education Technology on Student Achievement: What the Most Current Research Has to Say. *Milken Exchange on Education Technology*. http://www.milkenexchange.org/project/research/ME161.pdf (1 February 2000).

Karen Sheingold and Martha Hadley. *Accomplished Teachers: Integrating Computers into Classroom Practice*. Washington, DC: Office of Educational Research and Improvement, 1990. ERIC Document Reproduction Service No. ED 322 900.

CEO Forum on Education & Technology. http://www.ceoforum.org
See the report *Professional Development: A Link to Better Learning* (1999) at http://www.ceoforum.org/reports.cfm?RID=2

International Society for Technology in Education. http://www.iste.org

North Central Regional Educational Laboratory.
- Regional Technology in Education page. http://www.ncrtec.org
- Pathways to School Improvement. http://www.ncrel.org/sdrs/pathways.htm

U.S. Department of Education. Technology home page. http://www.ed.gov/Technology

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Technology

continued from page 2

schools are looking for additional means for collecting useful data for this purpose.

- Schools must document and report their evaluation findings in ways that satisfy diverse stakeholders' need to know.
- For evaluation efforts to provide stakeholders with answers to their questions about the effectiveness of technology in education, everyone must agree on a common language and standards of practice for measuring how schools achieve that end.
- The role of teachers is crucial in evaluating the effectiveness of technology in schools, but the burden of proof is not solely theirs.
- Implementing an innovation in schools can result in practice running before policy. Some existing policies need to be "transformed" to match the new needs of schools using technology.[4]

As these critical issues suggest, educators and evaluators have yet to agree upon accurate measures for assessing the effectiveness of instructional technology. A recent article by Tufts University technology staff suggests two "shifts in thinking" to keep in mind as assessments are developed.

The first shift is "from thinking of computers as technologies to thinking of learning theories as technologies."[5] The basis for this shift is the definition of technology as a process that can be repeated to obtain the same results. Under this definition, an instructional technology is one that provides repeatable steps that lead to learning. Behaviorism and constructivism would be examples of instructional technologies; computers and other technology tools would be pieces of the delivery systems.

This leads directly to the second shift in thinking: that we must recognize "the differences between delivery systems and the overall instructional environment."[5] Some instructional technologies are more suited than others to achieving certain learning goals. When determining the effectiveness of instruction, "any assessment needs to identify the underlying instructional technology and to consider its usefulness with respect to the learning goal."[6]

One Step at a Time

Clearly, the integration and evaluation issues are challenging. To avoid setting themselves up for disappointment, teachers and administrators should acknowledge that it will take time—and probably trial and error—to arrive at a place where everyone feels relaxed and confident about technology use.

Resources from SEIR•TEC at AEL

Three new publications can help administrators and teachers identify and evaluate effective technology use.

Principal Connections

This CD-ROM and companion Web site are designed to help school leaders recognize, promote, and evaluate effective technology use in their schools. Leaders can work at their own pace to examine their roles as technology leaders, identify barriers to integrating technology into their schools, learn strategies to help teachers become more accepting of technology, make informed decisions about allocating technology resources, and much more.

See order form/insert for more information.

Curriculum Snapshots

This publication provides glimpses into the classrooms of real teachers at various stages of technology integration. The snapshots illustrate appropriate and creative uses of technology at all grade levels and within different subject areas. Contributing teachers name useful software and hardware as well as supplementary content-related resources such as Web sites and videos. Software and video descriptions and a listing of software publishers/producers are also included.

See order form/insert for more information.

Software Use in the AEL Region

This regional survey peeks into Kentucky, Tennessee, Virginia, and West Virginia classrooms to learn how teachers in the region use software. *Educational Software Use: Results From a 1999 Regional Survey* includes a review of research on technology use in the classroom, descriptions of software types, and teachers' responses to questions about categories and frequencies of software use.

To get the report, visit AEL's Web site at http://www.ael.org/rtec/surintro.htm or contact John Ross at 800-624-9120 or rossj@ael.org.

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Formative Evaluation: Keeping Comprehensive School Reform on Track

In education, considerably more resources are often devoted to developing and implementing new programs than to evaluating their success.[1] Without evaluation, however, how can it be determined that implementation is being done correctly? How can areas of strength and weakness, as well as ideas for improvements, be identified?

Program developers and researchers in many professions use an approach called formative evaluation to address such questions. Evaluation conducted during the planning and operation of a program (as compared to that conducted at the end, which is known as summative evaluation) provides information that implementers can use to improve the program's effectiveness.[2] It is often conducted more than once with the intent to regularly monitor and improve the program.[3] The audience for formative evaluation typically consists of the program planners and/or implementers—the "in-house" staff of the program.

Evaluation and School Reform

The formative evaluation approach is especially appropriate for developing or adapting programs that focus on improvement, facilitating more effective implementation, and exploring a variety of effects on a diversity of participants or stakeholders.[4] Formative data can help to channel time, money, and human and material resources in productive directions.[5] These conditions all apply to school reform and, when Congress created the Comprehensive School Reform Demonstration program, it mandated that funded schools include annual evaluations in their reform plans.[6]

Formative evaluation may be done by an internal or external evaluator, and preferably by a combination of the two.[7] Often, formative evaluation presents logistical problems for schools, where overburdened staff, lack of evaluation expertise, and, in some cases, lack of impartiality can interfere with data collection.[8]

Generally, evaluators recommend using multiple data collection methods. One such method, site visits by external evaluators with assistance from local school staff, can improve and strengthen a project by bringing an "outsider" perspective to bear. This perspective may uncover many positive aspects of a project, and information concerning these strengths can be shared.[9]

Formative evaluation demands a feedback loop, whereby the data collected and judgments made are used to improve the product.[10] Timing and feedback are particularly important when the purpose of the data is program improvement. Formative evaluation reports should reach program staff in time for them to review how the program is functioning and decide what changes might be made to improve it.[11]

A Process for Schools

The Formative Evaluation Process for School Improvement (FEPSI), developed through a partnership between AEL and the Center for Research in Educational Policy at The University of Memphis (AEL/Center), directly facilitates formative evaluation of comprehensive school reform initiatives.

More specifically, the process

- invites reflection and encourages participation by key stakeholder groups
- offers expert evaluation partners, on-site, to assist in collecting and analyzing data and drawing valid conclusions
- provides direction and builds school capacity for data-driven decision making
- results in a report that identifies strengths and weaknesses of annual program implementation, and documents imple-

(continued on page 5)

70

Notes: Formative Evaluation

1. Steven M. Ross, *Why Formative Evaluation?* Charleston, WV: AEL, 1999. http://www.ael.org/rel/csr/process.htm (14 February 2000).
2. Blaine R. Worthen, Walter R. Borg, and Karl Richard White, *Measurement and Evaluation in the Schools* (New York: Longman, 1993).
3. Michael Scriven, *Evaluation Thesaurus*, 4th ed. (Newbury Park, CA: Sage, 1991).
4. Michael Quinn Patton, *Qualitative Evaluation and Research Methods*, 2nd ed. (Newbury Park, CA: Sage, 1990).
5. Blaine R. Worthen, James Richard Sanders, and Jody L. Fitzpatrick, *Program Evaluation: Alternative Approaches and Practical Guidelines* (New York: Longman, 1997).
6. Public Law 105-78.
7. See note 3 above.
8. See note 1 above.
9. Blaine R. Worthen and Karl R. White, *Evaluating Educational and Social Programs* (Boston: Kluwer-Nijhoff, 1987).
10. Eva L. Baker, "Formative Evaluation of Instruction." In *Evaluation in Education: Current Applications*, edited by W. James Popham (Berkeley, CA: McCutchen, 1974).
11. See note 5 above.

Research Notes

Reforming Low-Performing Schools

From the National Institute on the Education of At-Risk Students

All schools face challenges, but those faced by low-performing schools can be substantial. Often a large majority of their students perform below grade level and live in conditions that are not conducive to healthy child development. These children are at risk of academic failure, and reform models for their schools must include elements that meet students' special needs.

Research analyst Susan Talley recently examined school reform models funded by the Institute and looked at the research associated with the models. She identified six critical components that must be present in a reform model with potential to turn around low-performing schools.

A strong research-based literacy curriculum. Understanding the basic concepts of language starts with a child's earliest experiences with oral and written language. Children who haven't developed good preliteracy skills need research-based curricula that focus on building those skills and acquiring strong reading skills.

A significant extra help component. An effective model must incorporate opportunities for students to catch up to grade level through such strategies as summer school, creative scheduling, and innovative use of technology. Regular assessments to measure progress and to identify gaps in learning are also important.

(continued on page 12)

The U.S. Department of Education's Office of Educational Research and Improvement funds research through regional laboratories, national centers, and field studies.

Evaluation

(Continued from page 4)

mentation progress and early outcomes for school, district, and state stakeholders

Steps in the Process

When a district contracts with the AEL/Center partnership, they work together to identify staff to assist with data collection. The partnership assigns a site researcher who acts as the external evaluator and helps with data collection.

The foundation for the evaluation is laid through benchmarking around the key elements of the reform program. Each school, with help from AEL and the Center, develops benchmarks that specify three phases of progress. Schools find benchmarking to be powerful, both for its ability to bring staff together and for its ability to focus attention on the goals of reform. One principal noted that working on benchmarks resulted in more staff communication and collaboration. Another principal listed school activities that were inspired by benchmarks. They include a seminar to train tutors and a summer Kid's College for *all* students, not just those at risk.

The process defines baseline data through benchmarks, principal interviews, and school observation measures. The latter are repeated several times throughout the school year, and teacher interviews and a school climate inventory are added at the end of the year. Teacher and student focus groups and parent/community interviews may also contribute to the data.

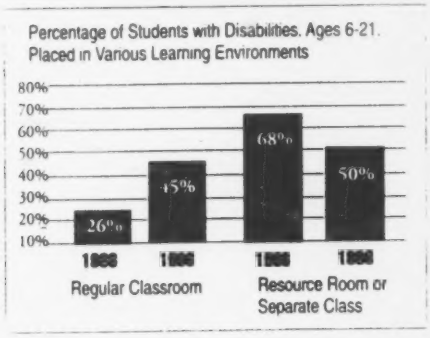
All data are processed and analyzed by the AEL/Center staff. An annual evaluation report for the school reviews progress on the implementation benchmarks and offers recommendations for improving the comprehensive school reform process. Nowhere is the emphasis on judging the staff and faculty; formative evaluation is about looking at the school as a whole to answer the question *How can we make this reform program work?*

As leaders work to balance the elements of reform in their schools, this process helps them oversee progress and fine-tune their efforts.

The Formative Evaluation Process for School Improvement created by AEL and the Center for Research in Educational Policy is being used with comprehensive school reform efforts in the AEL region and the state of Georgia. For more information, contact Steve Moats at 800-624-9120 or moatss@ael.org.

Good News about American Education

More Students with Disabilities Are in Regular Classrooms



A new report from the Center on Education Policy and the American Youth Policy Forum presents a positive picture of trends in education.

The authors of *Do You Know the Good News about American Education?* looked at data, mainly from the National Center for Education Statistics, across several years. They focused on five categories: school participation and curriculum, student achievement, educational climate, teachers, and higher education.

Findings from the report are highlighted throughout this issue of *The Link*. For the complete report, visit the Center on Education Policy Web site at http://www.ctredpol.org or phone 202-822-8065.

To contact the American Youth Policy Forum, phone 202-775-9731 or visit their Web site at http://www.aypf.org.

From *Do You Know the Good News about American Education?* Published in 2000 by the Center on Education Policy and the American Youth Policy Forum, Washington, DC.

Announcements: Training Opportunities

Equity Conference 2000

Teachers, administrators, guidance counselors, higher education personnel, preservice teachers, graduate students, parents, and others interested in race and language issues are invited to attend *Closing the Achievement Gap: Race and Language Issues*, May 17-19, 2000, at the Hyatt Regency in Lexington, Kentucky. The conference is sponsored by the Eisenhower Regional Consortium for Mathematics and Science Education and the Region IV Comprehensive Center at AEL, in collaboration with the Kentucky Department of Education's Equity Division.

Participants will receive information and resources that address the achievement gap; tools to assess the equity environment of their classrooms, schools, and districts; opportunities to create networks and partnerships to promote equity; and encouragement to develop action plans for equity implementation strategies in their classrooms, schools, and districts.

Featured speakers will include Dr. Ruth Johnson, professor at California State University, consultant, and equity advocate; Edward James Olmos, U.S. Goodwill Ambassador for UNICEF and executive director of the Lives In Hazard Educational Project, a national gang prevention program; Dr. Estela Matriano, vice president of the Cincinnati Minority Women's Network and executive director of the World Council for Curriculum and Instruction; and Dr. Barbara A. Sizemore, professor emerita at DePaul University and consultant in the areas of race and language.

Register early, as space is limited. Through April 14 the fee is $65; cost thereafter is $75; groups of three pay $130. For more information, visit AEL's Web site at http://www.ael.org/eisen, or phone Terry Foster or Angie Anderson at 800-624-9120.

QUILT Training-for-Trainers

QUILT—Questioning and Understanding to Improve Learning and Thinking—is a professional development program that increases student learning by improving teachers' classroom questioning techniques. The program works in elementary, middle, and high schools.

(continued on page 7)

72

Resources Available from AEL

From the ERIC Clearinghouse on Rural Education and Small Schools (ERIC/CRESS)

UnCommon Knowledge:

Guides for Hands-on Science and Math

Now 4-H, after-school, and other informal learning leaders have access to a set of activity guides for hands-on learning that will help youth explore the science and math of everyday life. Designed for middle-school level, the guides help youth discover many local treasures, sometimes in a nearby woods or vacant lot, other times in the memories of grandparents and elders. In a world that seems to value only the most current information and the newest findings in science, it is easy to overlook the value of traditional knowledge.

Background information, definitions, and other assistance for adult leaders are included, as are instructions, handouts, and guidance about where to get materials.

Volume One: Hands-On Science Projects is divided into three sections. "Eyes on Herbs: The Science of Folk Medicine and Natural Dyes" examines traditional uses of plants. "Food for Thought: The Science of Nutrition" helps learners explore connections among food, nutrition, and culture. "The Science of Food Preservation: Crocked Cabbage, Jerked Beef, and Pickled Pigs' Feet" relates microbiology, chemistry, physics, sociology, politics, and history through food preservation activities.

Volume Two: Hands-on Math Projects has two sections. "Pieces of Mine: The Mathematics of Quilting" leads learners into the worlds of planar (plane) geometry, symmetry, and tessellations. "Crafty Mathematician: Making Art through Mathematics" provides skill-building activities while helping learners understand the mathematics embodied in many craft activities.

The project guides are free and available only from the ERIC pages of AEL's Web site at http://www.ael.org/eric.

"The Voices of Girls" Documentary

Girls from one of the poorest rural counties in the United States surprised their families, teachers, and even themselves when they set out on a three-year exploration of the science and mathematics of everyday life. Girls with a broad range of abilities from special education to gifted were all successful in doing science and math. See the powerful impact the Voices of Girls project, funded by the National Science Foundation and operated by AEL, had on everyone involved.

This film by John Nakashima and Charles "Chip" Hitchcock was produced as part of the project and broadcast on West Virginia Public Television stations.

From SEIR•TEC at AEL

Curriculum Snapshots

This publication provides glimpses into the classrooms of real teachers at various stages of technology integration. The snapshots illustrate appropriate and creative uses of technology at all grade levels and within different subject areas. Contributing teachers name useful software and hardware as well as supplementary content-related resources such as Web sites and videos. Software and video descriptions and a listing of software publishers/producers are also included.

A companion Web site (http://ael.oreg/snapshot) offers educators a searchable database of lesson ideas as well as information on how to submit their own.

Principal Connections

This CD-ROM and companion Web site are designed to help school leaders recognize, promote, and evaluate effective technology use in their schools.

With the CD, users can work at their own pace to examine their roles as technology leaders, identify barriers to integrating technology into their schools, learn strategies to help teachers become more accepting of technology, make informed decisions about allocating technology resources, and much more. Interactive components and video are integrated into the sessions.

The Web site (http://www.principalconnections.org) provides supplementary materials that will be updated regularly to keep information related to the CD-ROM current. It also offers monthly software reviews and FAQs as well as a user poll and links to other sites that will be of interest to technology leaders.

Decision Tool for Education Leaders

As more school districts and education institutions explore distance-based learning, they need to know what to think about as they determine if and how to design or acquire courses. This easy-to-use decision tree, *Distance-Based and Distributed Learning: A Decision Tool for Education Leaders*, can help.

See inside for ordering information.

Resources Available from AEL

Some documents can be downloaded from our Web site (http://www.ael.org). Look for this symbol: W

___ A Guide to Gender Fair Education in Science and Mathematics (1998) W

This publication presents information gathered from the research and programs developed by hundreds of teachers and researchers in the field of education equity. Highlighted activities are examples of programs supported by the U.S. Department of Education and National Science Foundation, as well as states, counties, and cities. It includes an annotated bibliography of programs for girls in grades K-12. $15; 40 pp.

___ Briefs for Parents W

These sets of six articles are ready to cut and paste into your newsletter, newspaper, or periodical. Clearly and briefly, each article addresses a child development or education topic of concern to parents. They are available free (limit one copy of each set per order). To order, check the set(s) you wish to receive. Free.

___ Brief articles for a general audience of parents (English only)

___ Spanish language brief articles for parents (with English translations) 1999 edition, by Alicia Sosa

___ Charter Schools: The Perspective from AEL's Region (1999) W

This issue of *Policy Briefs* discusses the status of charter school legislation in Kentucky, Tennessee, Virginia, and West Virginia; regional concerns for policymakers; and the effect of federal criteria on funding. The brief distinguishes between charter schools and voucher programs, describes their operation and governance, summarizes research about their effectiveness, and identifies issues policymakers must consider when framing charter school legislation. $2; 8 pp.

___ Creating Safe Rural Schools (1999)

In this videotape, educators who have designed and implemented safety programs at the state, district, and school levels suggest ways to create safe rural school settings. $15; 58 minutes.

___ Curriculum Snapshots (2000)

This publication provides glimpses into the classrooms of real teachers at various stages of technology integration. The snapshots illustrate appropriate and creative uses of technology at all grade levels and within different subject areas. Contributing teachers name useful software and hardware as well as supplementary content-related resources such as Web sites and videos. Software and video descriptions and a listing of software publishers/producers are also included. $10; 108 pp. Access to the Web site and downloadable documents is free.

___ Dissolving the Boundaries: Planning for Curriculum Integration in Middle and Secondary Schools (1999 revision)

This publication helps secondary school faculties prepare for curriculum integration through a four-step process. The recent revision integrates technology use into the curriculum units. Book with 78-page facilitator's guide, $31; single or additional copies of book, $16; 83 pp.

___ Distance-Based and Distributed Learning (2000)

As more school districts and education institutions explore distance-based learning, they need to know what to think about as they determine if and how to design or acquire courses. This easy-to-use decision tree can help. $2.

___ EdTalk: What We Know about Reading Teaching and Learning (1998)

This publication suggests approaches to teaching minority, disabled, and limited English proficient students and offers ways to involve parents and the community. Areas covered include technology's role in reading instruction, professional development, and reading's relationship to other language arts and general subjects. $5; 70 pp.

___ Expanding the Vision: New Roles for Educational Service Agencies (1998)

Educational service agencies can serve an essential role to rural districts facing the challenges of systemic school reform, according to E. Robert Stephens. The author details the forces that are shaping current expectations of rural public education and lays the groundwork for considering future possibilities for agency programs and services. $18; 172 pp.

___ Factors Influencing the Effective Use of Technology for Teaching and Learning (1999) W

Schools and districts that want to improve their technology programs can benefit from lessons learned during three years of technical assistance and professional development to schools. The SouthEast and Islands Regional Technology in Education Consortium (SEIR*TEC), in which AEL is a partner, also shares success stories in this booklet. (Available in PDF at http://www.ael.org/rtec/index.htm.) Free; 12 pp.

___ Family Connections Parent Notebook

The *Family Connections* learning guides are now offered in a notebook for parents. The colorful learning guides are available in three volumes: *Family Connections 1* is for families of preschool children, *Relaciones Familiares 1* is the Spanish-language version, and *Family Connections 2* is for parents with kindergarten children. Each notebook contains a set of 30 four-page guides, plus tips for using them. $14.95 each ($11.95 without 3-ring binder).

___ Graphing Calculators in Mathematics Grades 7-12: A Resource Guide for the Classroom and for Preservice/Inservice Training (1998) W

This resource guide offers a series of lessons covering a wide variety of mathematical concepts and topics. Planned for teachers with no experience with graphing calculators and for those who have used the instruments since their inception, these lessons emphasize hands-on, problem-solving approaches, with connections to science and the real world. $39; 250 pp.

___ In Accord with Nature (1999)

In Accord with Nature demonstrates how educators and youth leaders can help middle-school-age and higher level students understand and define their relationship to nature and learn the importance of protecting the environment. Alternative teaching strategies and structured activities will connect students with the natural and the built worlds. $19; 192 pp. (ISBN 1-880785-20-X)

___ K-8: Building Blocks for Algebra (1998)

Recent research about the human brain supports what teachers have long observed: students learn by fitting new information with what they already know. *K-8 Building Blocks for Algebra: Patterns, Functions, Relationships* provides K-8 teachers with activities that bring the real world into the mathematics classroom and help children make sense of the relationships between numbers. $18; 108 pp.

BEST COPY AVAILABLE

___ **Local School Improvement Council Kit (1999 revision)**

Includes an information handbook, a facilitator's manual, and a videotape that provide information and team-building activities. It can be used as a workshop for all council members or as information resources by individual members. Specific to West Virginia codes and policies. $25.

___ **Next Steps: Research and Practice to Advance Indian Education (1999)**

Editors Karen Gayton Swisher and John W. Tippeconnic III asked a dozen indigenous scholars and practitioners to help answer such questions as What is "Indian education" today? and How will it look in the future? The essays they received help readers explore the issues that face educators who work with indigenous students. $28; 317 pp. (ISBN 1-880785-21-8)

___ **Notes from the Field: Evolution of the Primary Program in Six Kentucky Schools. Vol. 6, No. 1 (1998)** (W)

In this issue, researchers examine the development of the primary program in six rural Kentucky elementary schools, which they studied for eight years. This report is based on the entirety of the research, but the most detailed description comes from the 1996-97 school year, when researchers narrowed the focus of their work to the class of 2006. $2; 12 pp. plus 8-page supplement.

___ **Preventing Antisocial Behavior in Disabled and At-Risk Students (1996)** (W)

This issue of *Policy Briefs* focuses on children with ADHD and learning disabilities, presents a model that promotes prosocial behavior, and suggests considerations for preventive practice and policy making. $2; 12 pp.

___ **Principal Connections (2000)**

This CD-ROM and companion Web site are designed to help school leaders recognize, promote, and evaluate effective technology use in their schools. Leaders can work at their own pace to examine their roles as technology leaders, identify barriers to integrating technology into their schools, learn strategies to help teachers become more accepting of technology, make informed decisions about allocating technology resources, and much more. $99.

___ **Reaching Out: Best Practices for Educating Mexican-Origin Children and Youth (1999)**

Harriet Romo of the University of Texas at Austin describes successful approaches to improving outcomes for this growing population of U.S. students. $24; 232 pp. (ISBN 1-880785-22-6)

___ **Recruiting and Training Volunteer Tutors of Emergent and Beginning Readers in the Primary Grades (1998)**

This manual identifies characteristics of effective tutoring programs; suggests ways to recruit tutors and select the students they'll work with; presents a model for conducting tutor training sessions; and provides activities tutors can use to help readers with comprehension, word study, and writing activities. The activities are demonstrated on the trainer's video.

___ Trainer's package (includes 90-minute video, 64-page manual, and 15 activity cards). $225.

___ Tutor's package (includes 64-page manual and 15 activity cards). $30.

___ **School-Based Programs to Promote Safety and Civility (1998)** (W)

Schools are adopting antiviolence programs that, until recently, hadn't been studied for effectiveness. Now, several rigorous studies provide information to help schools and policymakers select methods that may work for them. This issue of *Policy Briefs* focuses on more than 20 primary and secondary level programs, all of which get a thumbs-up from researchers. Complete contact information is provided for each program. $2; 12 pp.

___ **Schools for Disruptive Students: A Questionable Alternative? (1998)**

Recent safe-schools legislation and commitments to provide safe learning environments have prompted states to create alternative schools for disruptive students. This issue of *Policy Briefs* reviews research and suggests indicators policymakers can monitor to judge the effectiveness of alternative school legislation. $2; 8 pp.

___ **The ABC's of Parent Involvement (1998)**

The ABC's of Parent Involvement in Education: Preparing Your Child for a Lifetime of Success offers information, inspiration, ideas, and expert advice to parents with children of all ages. AEL's Family Connections staff contributed early childhood knowledge. 134 pp. Single copies are $3, and a box of 50 costs $70 east of the Mississippi or $75 west of the Mississippi, shipping included.

___ **UnCommon Knowledge: "The Voices of Girls" Documentary**

Girls from one of the poorest rural counties in the United States surprised their families, teachers, and even themselves when they set out on a three-year exploration of the science and mathematics of everyday life. See the powerful impact the Voices of Girls project, funded by the National Science Foundation and operated by AEL, had on everyone involved. Filmed by John Nakashima and Charles "Chip" Hitchcock. Videotape, $15; 57 minutes.

AEL Information (free)

__ Sample *Family Connections 1* and *2*—take-home learning guides for young children

__ Interdisciplinary Teamed Instruction—professional development to help school teams plan integrated courses, units, and lessons

__ Quest—a process to help schools along the improvement journey

__ QUILT—Questioning and Understanding to Improve Learning and Thinking—a nationally validated, research-based professional development program

Information Search Packages

These are excellent references for policymakers, parents, and the public. Included are reprints of articles from journals, newsletters, and periodicals; ERIC Digests; an ERIC search; and information about AEL-produced materials and other resources.

___ **Block Scheduling (1996)** $15; 142 pp.
___ **Finding Answers to School Violence (1999)** $30; 272 pp.
___ **Technology in Education (1998)** $15; 136 pp.

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Announcements

(continued from page 6)

This year's national training will be June 18-23, 2000, at the Ramada Inn and Convention Center in Lexington, Kentucky.

With QUILT, the classroom environment becomes more active, student-centered, constructivist, inquiry-based, and metacognitive. A training-for-trainers approach helps school districts prepare local teachers who then train others in their region. Typically, a local school team (two teachers and an administrator) attends and learns to facilitate QUILT with its own faculty.

Please register by May 1. The weeklong training, five group lunches, daily breaks, and materials are covered in the registration fee of $675. Minigrants are available to support Kentucky elementary, middle, and high schools. For more information, or to register, call Shirley Keene at 800-624-9120, send e-mail to keenes@ael.org, or visit AEL's Web site at http://www.ael.org/rel/quilt.

Summer Curriculum Institute

(Formerly known as Interdisciplinary Teamed Instruction)

Those who attend the Summer Curriculum Institute will learn to design interdisciplinary instruction, connect learning activities and assessments to standards, develop students' thinking skills, make curriculum maps matter, and more. Teachers, teacher educators, administrators, and curriculum mapping site leaders are all welcome.

Many schools and districts are now mapping, or aligning, connections between curricula and standards. As they do this, they often discover that interdisciplinary instruction can help them meet standards in several content areas with one instructional unit.

This year the interdisciplinary training will be modified to build on school and teacher experiences with curriculum mapping. It will be July 17-20 at Athens Junior High School in Athens, Tennessee.

Space is limited, and the registration deadline is May 1. Sessions, lunches, and materials are included in the $350 registration fee. To register, or for more information, contact Becky Burns at 800-624-9120 or burnsr@ael.org. To learn more about interdisciplinary instruction, visit AEL's Web site at http://www.ael.org/rel/iti.

Teacher Workshops to Explore Energy and More

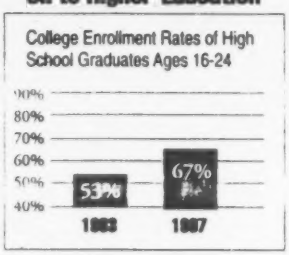
This summer, K-12 teachers can attend workshops that offer hands-on experiences; real-world perspective; and materials, technologies, and strategies they can use to improve student achievement. Course topics will include energy, environmental, economic, scientific inquiry, education technology, and community development issues. Most will feature one or more tours to such sites as coal mines and reclamation areas, an international wildlife preserve, power plants, or river transportation facilities.

Workshops will range in length from 2 to 10 days and will offer graduate credit of one to three hours. Graduate credit is free at most sessions, although a few require credit fees and some require a nominal, nonrefundable registration fee. Teachers may be eligible for housing, meal, and mileage reimbursements based on their distance from workshop sites in Indiana, Ohio, Virginia, and West Virginia.

The workshops are sponsored by American Electric Power (AEP) in conjunction with universities and other organizations. The application deadline is April 30 and first priority will be given to teachers who live and teach within AEP's service area, which includes Kentucky, Tennessee, Virginia, and West Virginia.

For applications or more information, visit the AEP Education/Community Web site at http://www.aep.com, e-mail blschumann@aep.com, or write AEP Corporate Communications Programs, 1 Riverside Plaza, Columbus, OH 43215.

More Students Are Going On to Higher Education



See "Good News about American Education" on page 6.

Grant Opportunities

Federal Programs

National Science Foundation: Teacher Enhancement Programs

Purpose: To improve mathematics, science, and technology education in schools through the support of professional development for teachers.

Areas of special interest include building the capacity for K-12 mathematics, professional development of middle school math teachers; professional development of secondary science teachers, and innovative high-risk projects.

Deadlines: Preliminary proposals due April 1, 2000; formal proposals due August 25, 2000

Guidelines available on-line at http://www.nsf.gov or by phone at 703-306-1613.

National Endowment for the Humanities: Schools for a New Millennium

Purpose: To help educators refresh their commitment to excellent humanities teaching and learning through intensive professional development activities that incorporate content-rich technological resources into the classroom.

Project objectives might include helping teachers explore and master innovative uses of technology; implementing schoolwide professional development that links content and pedagogy in ways that transform the curriculum; enlisting the support of the wider community in these reform activities; and supporting schools to serve as national models of excellence in humanities teaching and learning, especially through innovative uses of technology in instruction.

Grants will provide a total of up to $200,000 for up to three years. Actual amounts will vary according to project scope.

Deadline: Applications due October 1, 2000

Announcement and guidelines available on-line at http://www.neh.gov, by e-mail at education@neh.gov, or by phone at 202-606-8380.

Foundations

Candle Foundation: Education and Information Dissemination

Purpose: To fund innovative, high-impact, low-overhead projects for which beneficiaries are chosen without regard to religion, politics, or ethnicity.

Education grants may include anything from expansion of a literacy program to support for home improvement skills training for at-risk youth.

Grant awards range from $1,000 to $10,000.

Deadline: May 16, 2000

Application and guidelines available on-line at http://www.candle.com/aboutcandle/community/foundation/fundingareas.htm, by e-mail at martha_mossawir@candle.com, or by mail from The Candle Foundation, 201 N. Douglas St., El Segundo, CA 90245.

The Coca-Cola Foundation: Classroom Teaching and Learning

Purpose: To provide youth with the educational opportunities and support systems they need to become knowledgeable about the world in which they live and better able to give back to their communities.

Areas of special interest include innovative K-12 public school programs, inside and outside the classroom walls; support of teacher development programs; and smaller projects dealing with specific activities in the elementary and secondary classroom.

Grant amounts range from $5,000 to $200,000 and up.

Deadline: Open, reviewed quarterly

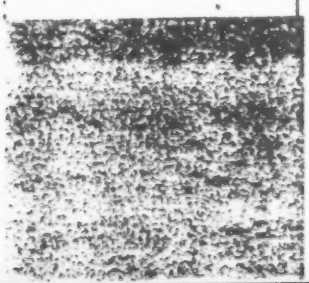
More Help with Funding

Want to find more funding resources? The Internet offers everything from directories of funding sources to instruction in grant writing, evaluation, and dissemination. Here are a few places to go.

U.S. Department of Education: Funding Opportunities
http://www.ed.gov/funding.html

Notices Inviting Applications
This e-mail newsletter from the U.S. Department of Education lists funding opportunities and provides links to information and applications. To subscribe to EDInfo, address and mail message to: listproc@inet.ed.gov. Then write SUBSCRIBE EDINFO YOURFIRSTNAME YOURLASTNAME in the message (if you have a signature block, please turn it off). Then send it!

(continued on page 9)



78

Application and guidelines available on-line at http://www.thecoca-colacompany.com and by mail from The Coca-Cola Foundation, Grants Administration, P.O. Drawer 1734, Atlanta, GA 30301.

Captain Planet Foundation

Purpose: To support innovative hands-on environmental projects that empower children and youth to solve environmental problems in their neighborhoods and communities.

Projects should promote understanding of environmental issues, promote interaction and cooperation within the group, develop planning and problem-solving skills, and include adult supervision.

Grants generally range from $250 to $2,500.

Deadline: Open, reviewed quarterly

Application and guidelines available on-line at http://www.turner.com/cpf, by e-mail at Captain.Planet.Foundation@turner.com, or by phone at 404-827-4130.

Ludwick Family Foundation

Purpose: To encourage new and expanded projects and programs by providing grants to nonprofit organizations for new equipment, equipment replacement and modernization, improvements to facilities, and educational materials.

Grants are made for a single year and typically range from $5,000 to $50,000.

Deadlines: Inquiry letter by March 31, 2000 (August 31, 2000) for review April/May (September/October). Full proposal (if invited) due May 30, 2000 (October 31, 2000) for October 2000 (February 2001) decision.

Guidelines available on-line at http://www.ludwick.org, by e-mail at ludwickfndn@ludwick.org, or by phone at 626-852-0092.

Mitsubishi Electric America Foundation: Starfish Grants

Purpose: Through technology, to help young people with disabilities to maximize their potential and participation in society.

Proposals should address a significant need of young people with disabilities, have potential for national scope and impact, and represent an innovative approach involving technology.

Grants may cover both projects and operating support for a maximum of three years.

Deadline: Concept paper due by July 1.

Guidelines available on-line at http://www.meaf.org and by mail from MEA Foundation, 1560 Wilson Blvd., Suite 1150, Arlington, VA 22209.

Other

The Southern Poverty Law Center: Teaching Tolerance Project

Purpose: To combat hate, intolerance, and discrimination through education.

Teaching Tolerance is looking for small-scale, student-focused, ongoing projects that promise direct and immediate impact. The project also offers free educational materials and training kits to educators.

Grants of up to $2,000 will be awarded to K-12 teachers who implement tolerance education projects in their schools and communities.

Deadline: Open

Materials and grant guidelines available at http://www.splcenter.org and by mail from Teaching Tolerance Grants, 400 Washington Ave., Montgomery, AL 36104.

(continued from page 8)

Kathy Schrock's Guide for Educators: Grant Sources
http://school.discovery.com/schrockguide/business/grants.html

Grant Seeking Primer
http://teacher.scholastic.com/professional/grants/grantprimer.htm

Creating and Sustaining Project Impact: Guidelines for Evaluation and Dissemination
http://www.meaf.org/roadmap.html

SchoolGrants Newsletter
This free electronic newsletter highlights information available on the organization's Web site (http://www.schoolgrants.org). To subscribe, send a blank e-mail to subscribe@schoolgrants.org.

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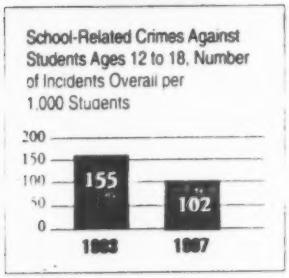
Publications of Interest

School Crime Is Declining



See "Good News about American Education" on page 6.

Making Standards Understandable

What does systemic reform have to do with standards and assessment? Aren't standards and curriculum the same thing? How do we explain standards to parents? How do I judge my students' performance of the standards? What has been the impact of the standards movement?

Answers to these questions and more are found in *Advancing Standards for Science and Mathematics Education: Views from the Field*. Editor Kathy Comfort has collected writings by experts on education policy, equity, literacy, public opinion, technology, teacher education, and more.

Advancing Standards is the latest volume in the series This Year in School Science published by the American Association for the Advancement of Science.

The publication is available on-line at http://ehrweb.aaas.org/ehr/forum.

Making Instruction Better

Project Alliance was a professional development program conducted from 1994-1998 by a partnership between the American Association for the Advancement of Science and George Mason University, with funding from the National Science Foundation. Teacher teams from schools in the mid-Atlantic region—Virginia and West Virginia among them—designed and piloted integrated curriculum units and disseminated the team planning and teaching process in their schools.

Project Alliance recently released a report of its summative evaluation and research findings titled *Project Alliance: Enhancing Science and Technology Instruction in the Middle Grades through Interdisciplinary Team Planning and Teaching*. It states that "participation increased teachers' content knowledge and pedagogical skills in teaching environmental science. Teaching became less traditional, more hands-on, and more inquiry-based." Teachers reported more collaboration among colleagues and positive effects on student interest and performance.

Three important Project Alliance outcomes are described in the report, as are program design, narrative case studies of teams and teachers, and a summary of the impact of the program in different school contexts.

The publication is available on-line at http://ehrweb.aaas.org/ehr/projectalliance.

Workplace Learning

Millions of young adults hold entry-level jobs—jobs that provide both paychecks and opportunities to learn skills. The learning opportunities need to be taken advantage of, and that's the purpose of *WORKplus*, a set of work-based materials created by Public/Private Ventures and the Northwest Regional Educational Laboratory.

Designed to be used by employers, supervisors, employees, schools, community-based organizations, and workforce development agencies, *WORKplus* includes three components:

- Employee Development Workshops. These 60- to 90-minute sessions guide entry-level employees to become more thoughtful, confident, and productive.
- Supervisor Development Workshops. These sessions help supervisors understand the developmental needs of young people, build their own communication and coaching skills, and learn strategies that help their young employees gain skills and behaviors that lead to success.
- Staff Guide. This provides information and ideas for delivering the workshops and assessing outcomes, and guidelines for collaborations among organizations.

80

The full set costs $125, plus $10 shipping. Individual pieces may also be purchased. To order, write Public/Private Ventures, Publications Department, 2005 Market St., Suite 900, Philadelphia, PA 19103, or phone 215-557-4465.

Teaching Language Literacy in Diverse Settings

A new videotape from Pacific Resources for Education and Learning (PREL) takes viewers to a teleconference on teaching reading to diverse student populations. *First and Second Language Literacy: From Research to Practice* includes discussions among regional and national educators about research-based effective practices.

The hour-long video also provides examples of these practices in action as it goes into classrooms from three Pacific island communities: Kosrae, where initial reading is taught in Kosraean; American Samoa, where English is the language of instruction and Samoan is used for support; and Hawaii, where English-speaking students are taught through immersion in Hawaiian.

The videotape costs $19.95. An on-line order form is available at http://www.prel.org or you may mail your order to PREL Distribution Department, Ali'i Place, 25th Floor, 1099 Alakea St., Honolulu, HI 96813. For more information, phone 808-441-1300 or e-mail askprel@prel.org.

TQM and School Reform

What does it mean to be a good leader and manager in today's schools and districts? In answering this question, some schools, districts, and states have looked to the business community and explored their use of Total Quality Management (TQM).

In a prior publication, *Going to Scale with TQM: The Pinellas County School's Journey Toward Quality*, the SouthEastern Regional Vision for Education (SERVE) described how one Florida district used training in TQM as a foundation for its reform efforts.

Over the last few years, leaders from Pinellas County have shared their experiences with a coalition of North Carolina educators, business leaders, and policymakers. To support educators in their pursuit of quality leadership and management, SERVE encouraged the North Carolina Total Quality in Education Initiative to tell its story.

SERVE recently created *Ramping-Up Reform: Aligning Education Rhetoric, Resolve, and Results*, a publication that represents the reflections of those involved in the North Carolina Initiative. This publication can help business and education leaders explore how they might work together to create "high-performing" education organizations.

The book costs $8, plus shipping. Mail purchase orders or checks to Amy Williams, SERVE, 1203 Governor's Square Blvd., Suite 400, Tallahassee, FL 32301, or fax to 850-671-6020. For more information, send e-mail to AWILLIAM@serve.org.

classrooms@work/tools@hand

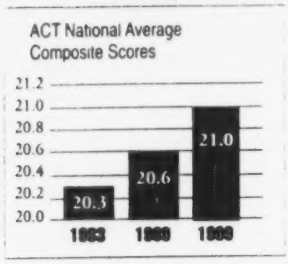
Most teachers would jump at the opportunity to visit the classroom of someone who's successfully using technology—to be able to interview the teacher, observe the teacher's practices, watch the kids in action, and get samples of classroom materials. Firsthand access to all this would be ideal professional development.

That's the premise with which Northwest Regional Educational Laboratory staff designed *classrooms@work/tools@hand*. It uses videos and Web-based multimedia material to give teachers a way to hear, see, and gain from another teacher's experience.

The Web site (http://www.netc.org/classrooms@work) currently features two classrooms and more will be added. The package is also available on CD-ROM for those without Internet access. Two 15-minute videos that introduce the classrooms make good additions to a district or regional presentation. The CD-ROM and videos cost $15 each; access to the Web site and downloadable documents is free.

Order on-line, by e-mail to bateya@nwrel.org, or phone 800-211-9435.

ACT Test Scores Are Up



See "Good News about American Education" on page 6.

Research Notes

(continued from page 5)

A focus on smallness. Size matters, in the classroom and the school. Small size encourages closer, more caring student-teacher and student-student relationships and permits teachers to use more individualized and interactive instructional strategies.

A commitment to parental outreach and community building. Because many students do not have access to adequate nutrition, health care, and social services, schools must build partnerships with parents and other strategic groups.

An ongoing, schoolwide program of social skills development. Many at-risk students lack social skills that help them adjust to the demands of the school environment. Reform models must include instruction in how to get along with others, resolve conflicts peacefully, and develop other life skills.

A comprehensive, sustained staff development program. Promising school reform models are very complex and often require much study, effort, and time to implement. These models must include intensive staff development that provides teachers with skilled trainers in school and classroom settings. Classroom-based mediated assistance for teachers is an essential ingredient.

"What Does It Take to Reform a Low-Performing School?" Susan Talley in *From At-Risk to Excellence*, 1(1) Spring 1999. Available on-line at http://www.ed.gov/offices/OERI/institute.html. Order toll-free by phone at 877-4-ED-PUBS or by e-mail at edpubs@inet.ed.gov

AEL is a private, nonprofit corporation. AEL serves as the regional educational laboratory for Kentucky, Tennessee, Virginia, and West Virginia. For these same four states, it operates both a Regional Technology in Education Consortium and the Eisenhower Regional Consortium for Mathematics and Science Education. In addition, it serves as the Region IV Comprehensive Center and operates the ERIC Clearinghouse on Rural Education and Small Schools. AEL's primary source of funding is the Office of Educational Research and Improvement (OERI), U.S. Department of Education. This publication is produced with funds from OERI contract number RJ96006001. The contents herein do not necessarily reflect AEL or OERI policies or views.

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Vol. 19, No. 2

THE LINK

A PUBLICATION FOR EDUCATION PRACTITIONERS

Professional Development

Enlist Colleagues in Reflection and Planning

Focused on student learning. Driven by a coherent long-term plan. Planned collaboratively by those who will participate.

These phrases from the U.S. Department of Education's principles of high-quality professional development describe current thinking about helping educators learn how to help students achieve. Much can be accomplished with the resources at hand in a school or district.

Collaboration

Whether they're dealing with comprehensive school reform, integrating technology into the curriculum, or helping students achieve to high standards, school staff and teachers who want to be more effective look for high-quality professional development. Some of their best resources may be right down the hall. When colleagues become collaborators, members of a school community can support and enrich one another's work to the benefit of all.

Michael Fullan, dean of the Ontario Institute for Studies in Education at the University of Toronto, suggests that schools with a collaborative work culture manage change better, and that collaborative culture is developed in part through becoming a learning community.[1]

In its framework for teacher professional development, the National Center for Research on Teacher Learning provides suggestions for new roles and ways of teaching to support education reform efforts. Among them are the following:

- First and foremost, teachers need *opportunities to work with colleagues*, both in their school building and beyond. They need chances to learn from one another's successes and failures and to share ideas

(continued on page 2)

IN THIS ISSUE

Professional Development
Enlist Colleagues in Reflection and Planning, p. 1

Research Notes
Helping Elementary Students Achieve "Thoughtful Literacy;" Making the Most of Summer School; Rural Systemic Reform; Long-Term Effects of Early Childhood Interventions, p. 4

Grant Opportunities
Federal, Foundation, and More, p. 8

Publications of Interest
High Stakes Testing; Assessment Resources; Education Research and Promising Practices; Math and Science Challenge for 8th Graders; Reading Panel Report; Math Standards on CD-ROM; On-line Technology Journal, p. 10

Instructional Strategies
Ridding Math Word Problems of Language Barrierss, p. 11

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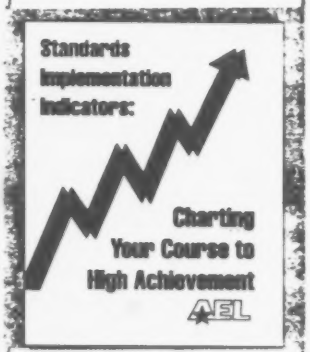

See Insert/Order Form in center to learn about avoiding road blocks and detours on the road to improvement.

The Link is free to educators in the AEL region. Readers are encouraged to reproduce its contents, giving proper credit. On request, AEL will provide camera-ready copy on white paper. Current and many back issues are available in PDF at http://www.ael.org.

Professional Development

(continued from page 1)

and knowledge.

- Teachers need to be part of *a larger learning community* that is a source of support and ideas—a community that consists of administrators, students, parents, school councils, school boards, and business people.[2]

The National Staff Development Council (NSDC), in its national professional development plan, includes recommendations that urge school systems to

- Embed opportunities for professional learning and collaborating with colleagues in the daily schedule of teachers. NSDC advocates that at least 25% of teachers' time be devoted to their own learning. Schools should schedule more time for collaborating with colleagues.
- Recognize the importance of skillful leaders in schools and at the district level who have a deep understanding of instruction, curriculum, assessment, and the organizational factors that affect student learning.[3]

Reflection

The value of reflection is gaining increasing recognition, as evidenced by a study conducted by teachers in the education college at Ohio State University. They evaluated two groups of graduate students in the school of education. While both were asked to reflect once a week on what they were learning and record their thoughts in a journal, the control group was told little more than that. The experimental group received advice and guidance, and was also encouraged to talk with other students. The researchers found that the journal entries of the experimental group demonstrated a higher level of internalization and more practical ideas for ways to use what had been learned.[4]

Structured reflection helps practicing teachers also, as many action researchers would confirm. The School Change Collaborative of the Regional Laboratory Network Program, a group of researchers, education practitioners, students, and parents, has nurtured reflective processes that help schools improve. One of these, Structured Reflection Protocol, has been used by several schools in the AEL region.

Principal Earl Wiman of Alexander Elementary School in Jackson, Tennessee, credits the process with helping to raise writing scores. In 1998, 51% of Alexander's fourth graders scored below "competent" on the Tennessee Writing Assessment. After a year of using Structured Reflection Protocol with teachers and students, only 33% of fourth graders landed in the "flawed" or "deficient" categories. An Alexander teacher reported that the process gave her discussions a focus they might otherwise have lacked. Wiman believes that teaching students the process helped them begin to view writing not as work assigned by the teacher, but as their own.[5]

Planning

Making time to collaborate and reflect with colleagues are strategies that should be included in a school- or district-level professional development program. The following two programs provide guidance on planning a high-quality program.

National Awards Program for Model Professional Development

This program recognizes schools and districts with model professional development activities in the pre-kindergarten through 12th-grade levels that have led to increases in student achievement.

(continued on page 3)

Notes: Professional Development

1. "Leading Change in Professional Learning Communities." *Education Update*, 41 (8), December 1999, 1-2.
2. The National Center for Research on Teacher Learning, *Learning to Walk the Reform Talk: A Framework for the Professional Development of Teachers*. (East Lansing, MI: NCRTL, 1995).
3. D. Sparks and S. Hirsh, *A National Plan for Improving Professional Development*. Oxford, OH: National Staff Development Council, 1999. http://www.nsdc.org/library/NSDCPlan1.html (31 January 2000).
4. J. Archer, A. Bradley, and D. Hoff, "Teacher Reflection" in Teaching & Learning section, *Education Week*, March 3, 1999, 12.
5. C. Howley-Rowe, in a forthcoming AEL case study evaluation report.

The Principles of High Quality Professional Development

The U.S. Department of Education recognizes schools and districts that provide high-quality training to their educators. AEL and the nation's other regional educational laboratories work with department staff to review applications, make site visits, and select award winners.

High-Quality Professional Development

- focuses on teachers as central to student learning, yet includes all other members of the school community
- focuses on individual, collegial, and organizational improvement
- respects and nurtures the intellectual and leadership capacity of teachers, principals, and others in the school community
- reflects best available research and practice in teaching, learning, and leadership
- enables teachers to develop further expertise in subject content, teaching strategies, uses of technologies, and other essential elements in teaching to high standards
- promotes continuous inquiry and improvement embedded in the daily life of schools
- is planned collaboratively by those who will participate in and facilitate that development
- requires substantial time and other resources
- is driven by a coherent long-term plan
- is evaluated ultimately on the basis of its impact on teacher effectiveness and student learning, and this assessment guides subsequent professional development efforts

Get More Information

National Awards Program for Model Professional Development

Get application information from Sharon Horn, Office of Educational Research and Improvement, U.S. Department of Education: phone 202-219-2203, fax 202-219-2198. You may also use e-mail: sharon_horn@ed.gov or visit the Web site at http://www.ed.gov/inits/teachers/teach.html.

National Board for Professional Teaching Standards

Visit the Web at http://www.nbpts.org or phone 800-22TEACH.

(continued from page 2)

Prepare to apply with the help of *Professional Development: Learning From the Best*. This toolkit for schools and districts, just released through a cross-lab effort that involved other education groups and the U.S. Department of Education, is based on the National Awards Program. It guides professional development planners through the steps of designing, implementing, evaluating and improving, and sharing professional development learning. It includes tools that support each step, as well as profiles of schools that have won model professional development awards. Copies are available free on-line at http://www.ncrel.org/pd/toolkit.htm or contact North Central Regional Educational Laboratory at 800-356-2735 for information about purchasing print copies.

The National Board for Professional Teaching Standards

The Five Propositions of Accomplished Teaching

1. Teachers are committed to students and their teaching.
2. Teachers know the subjects they teach and how to teach those subjects to students.
3. Teachers are responsible for managing and monitoring student learning.
4. Teachers think systematically about their practice and learn from experience.
5. Teachers are members of learning communities.

Around these five propositions, the Board builds standards for professional achievement in many specialty areas. National Board Certification offers many rewards, not the least of which is being recognized as a professional.

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Research Notes

The U.S. Department of Education's Office of Educational Research and Improvement funds research through regional educational laboratories, national centers, and field-initiated grant studies. Here are summaries of recent work in various areas.

Helping Elementary Students Achieve "Thoughtful Literacy"

Center on English Learning & Achievement

As part of an ongoing study of effective classrooms led by highly effective teachers, researchers have identified a set of core teaching characteristics that seem to foster thoughtful literacy in elementary students.

Managed choice helps to involve students in learning and to increase their interest in a subject and the quality of their work. Teachers find a balance between making all decisions themselves and turning decisions over to students, thus providing students with more control over learning.

Providing a *multi-source curriculum* helps students gain different perspectives and an in-depth understanding of a topic. Augmenting textbooks with other sources helps students compare, summarize, synthesize, and generally develop higher-level thinking skills.

Multi-task learning means avoiding situations that expect every student to produce the same answers. Rather, multi-task assignments might ask students to use their own thinking to write a summary or synthesis of a lesson. This might include creating a graphic organizer that could be used as a basis for a discussion in which every student would be expected to take part.

Meaningful classroom discussion plays an important part in the study's effective classrooms. Not only do these discussions help to build content understanding, they help students learn to value and appreciate their own thinking and that of others.

Effective teachers know that *thinking takes time*. They use integrated instruction to create large blocks of time devoted to specific topics. This gives students a chance to experiment with, think through, discuss, and refine their understandings.

These core practices do not fit the traditional lesson plan format, but the effective teachers who use them find them no harder to implement. And they believe the results—improvements in student work and involvement—make them well worth considering.

Paula Preller, "Fostering Thoughtful Literacy in Elementary Classrooms," in *English Update* (Spring 2000). The Center on English Learning & Achievement. Available on-line at http://cela.albany.edu. For a print copy, write *English Update*, University at Albany, SUNY, ED-B9, 1400 Washington Ave., Albany, NY 12222, or phone 518-442-5026.

Making the Most of Summer School

University of Columbia-Missouri

Summer schools can provide remediation or enrichment for students as well as extra income and professional development for teachers. Given the current emphasis on helping all students meet challenging standards, summer programs will likely continue to grow. Researchers analyzed and synthesized the results of 53 evaluations of summer schools. Study results have important implications for policymakers and program administrators.

Key Findings

- Programs that focused on remediation had a positive impact on knowledge and skills. There were larger effects on math achievement than on reading, and greater effects for students in the early primary grades and in secondary school than those in the middle grades.
- Summer school programs that focused on multiple goals or acceleration of learning had a positive impact about equal to programs that focused on remediation.
- Middle-class students experienced greater achievement gains than students from disadvantaged backgrounds.
- Summer school programs had positive effects for students with disabilities.

- When summer remedial programs serve a small number of students and schools in a small community, positive effects may be larger. However, larger programs may be serving poorer communities, so economics may be an underlying cause for the difference in effects.
- Summer school programs that include regular monitoring of instruction may produce larger effects than those that are not monitored.
- Mandatory-attendance summer remedial programs are as effective, if not more effective, than voluntary attendance ones.

Recommendations for Policymakers

- Continue funding for summer school programs.
- Direct a significant portion of funding to mathematics and reading instruction.
- Set aside funds to help students, particularly those from disadvantaged backgrounds, participate. This could include transportation and food service.
- Allow significant local control of service delivery, since flexible delivery systems may improve outcomes.
- Require rigorous formative and summative evaluations.

Recommendations for Program Implementers

- Plan early to ensure that summer programs are seen as integral to school services.
- Provide continuity from year to year, with an emphasis on hiring staff who have worked in the program in past years.
- Integrate summer professional development with summer school to allow teachers to practice using new curricular or pedagogical approaches.
- Implement programs that operate shortly before the new school year, using students' regular classroom teachers for at least part of the instruction. The researchers call such an approach "The Running Start Summer Program Component."

Cooper, Harris; Charlton, Kelly; Valentine, Jeff C. *Making the Most of Summer School: A Meta-Analytic and Narrative Review.* University of Missouri-Columbia, 1998.
For information on the study, e-mail Oliver_Moles@ed.gov. For copies of the publication, e-mail cooperh@missouri.edu or visit the Web at http://www.missouri.edu/~psychhc.

Rural Systemic Reform

Northwest Regional Educational Laboratory

This study examined education reform in rural Alaska communities and schools, but it provides findings and recommendations that are relevant to rural schools and communities anywhere in the country.

Researchers conducted seven case studies in villages and school districts, all of which were using a reform process called Alaska Onward to Excellence (AOTE). This program works to build partnerships between the community and schools by involving the community in helping to shape and monitor the direction of the education system.

Key Issues to Implementing Reform

- *Sustaining reform.* The most significant barrier to sustaining reforms was persistent teacher, principal, and superintendent turnover. While rural schools employ only one-third of the state's teachers, they typically hire over two-thirds of the new teachers each year. Such turnover results in schools having to reinvent themselves every two or three years. Though AOTE helped to create leadership within the community, the district and the community should develop talent from within so that teachers are strongly rooted in the communities where they teach.
- *Sharing leadership.* Community ownership in decisions related to reform will help move education changes forward even if the school staff changes.

(continued on page 6)

National Clearinghouse for Comprehensive School Reform

Want to know more about reform models? Interested in sharing experiences with other schools undergoing comprehensive reform? Need information on best practices? Looking to join a community of school reform researchers? Go to the Clearinghouse Web site for reports, discussion groups, resources, an electronic newsletter, and more.

The Clearinghouse is funded by the U.S. Department of Education's Office of Educational Research and Improvement and operated by The George Washington University.

Web address: http://www.goodschools.gwu.edu
E-mail address: AskNCCSR@goodschools.gwu.edu
Phone toll-free: 877-766-4CSR
National Clearinghouse for Comprehensive School Reform
George Washington University
2121 K Street, Suite 250
Washington, DC 20037-1801

Research Notes

(continued from page 5)

- *Building relationships and trust.* Reformers in rural areas need to understand local context and build reforms from the inside out rather than relying solely on external reform models.
- *Enacting new roles.* Rural schools need to create a range of parent involvement strategies that are appropriate for small communities.
- *Creating coherent reforms.* AOTE helped to set a clear direction and vision for student success and gave school staff and community members the opportunity to think about and discuss how to work together to educate children in a changing world. Yet, it did not help to substantially change teaching and learning because there were already so many educational programs operating in the schools.
- *Creating healthy communities.* The case studies found that education had a larger purpose than teaching academic skills and knowledge. AOTE helped communities to identify community wellness goals as well as academic goals.

Recommendations

- Stabilize professional staff in rural schools. School districts can establish career ladders and staff development plans. The state department can work with universities on licensing regulations and teacher education standards.
- Provide role models and support for creating a positive self-image. Students are often caught between their indigenous culture and the influences of the outside world. (Native educators developed Alaska Standards for Culturally Responsive Schools to deal with some of these issues.)
- Treat parent involvement as a partnership, with more shared decision making.
- Implement teacher orientation, mentoring, and induction programs.
- Extend strategic planning to the next generation or more (20-plus years) at the state and local levels. Many issues facing rural schools are cross-generational in nature and need to be addressed over a longer time span than is typically used in strategic plans.
- Develop culturally responsive curricula that integrate local and global academic and practical learning.
- Encourage the development of multiple paths for students to meet state standards. In Alaska, the cultural standards developed by Native educators help students meet state standards while also becoming "responsible, capable, and whole human beings."
- Extend the cultural standards and Native ways of knowing and teaching into teacher preparation programs.
- To sustain reform, use a bottom-up process with a purpose that goes beyond reform for reform's sake.
- Form a coalition of organizations to sponsor an annual conference on rural education. Such a conference could review reform initiatives, showcase promising curricular reform models, provide information on implementation, and help participants establish a support network.

Study of Alaska Rural Systemic Reform: Final Report. Northwest Regional Educational Laboratory and University of Alaska Fairbanks. October 1999.

For information on the study, e-mail Beth_Fine@ed.gov. For copies of the publication, e-mail KushmanJ@nwrel.org.

Improving America's Schools Conferences

Mark your calendars now for these events.

- October 2-4, Louisville, KY: Central region, includes Tennessee and Kentucky
- December 13-15, Washington, DC: Eastern region, includes Virginia and West Virginia

Updates about the conferences, as well as videos of 1999 sessions and Education Reform Institute resources, are available on-line at http://www.ncbe.gwu.edu/iasconferences. Get information by phone at 800-203-5494.

Long-Term Effects of Early Childhood Interventions

Predictors of Early High School Dropout in the Chicago Longitudinal Study

University of Wisconsin at Madison

An ongoing study has examined the effects of participation (from ages 3 to 9) in

New Resources from AEL

Standards Implementation Indicators: Charting Your Course to High Achievement

When students perform well on statewide tests, the school is on the right track. When their performance is disappointing, it's time to check a road map and chart a new course.

AEL developed this research-based tool to help school leaders look at their progress toward standards-based instruction and set a course that avoids detours and dead ends. Discoveries can help to create strong improvement and professional development plans.

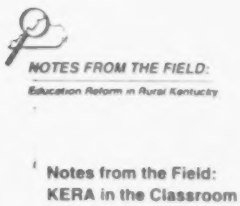
The tool includes:

- **A set of six indicators** that will show school leaders if they have
  - a curriculum aligned with content and assessment standards
  - a curriculum validated for rigor, alignment, and balance
  - classroom assessments that check mastery and predict success on standardized tests
  - a taught curriculum that matches written and tested curricula
  - a system for using data to guide school improvement decisions
  - district policies and resources that support standards implementation
- A **Comprehensive Profile Chart** for interpreting the six indicator ratings
- **A planning form,** Charting Your Course—An Action Plan for Implementing Standards, to use with school faculty and/or district administrators

Report Describes Progress in Kentucky Education, Recommends "Next Steps"

The Kentucky Education Reform Act of 1990 has benefitted students, but some key components have not been fully realized, according to a report from AEL, Inc. Signs of progress include rising test scores, improved school facilities, and a more varied classroom experience. Contributing to these successes are new support programs, technology resources, and well-stocked classrooms, as well as greater inclusion of special education students in mainstream classrooms.

Some aspects of the reform warrant further attention. While test scores are on the rise, educators are having difficulty helping all students achieve at high levels. Increased funding has improved school facilities and provided technology resources, yet teachers are not fully integrating technology into the instructional program. More diverse instructional practices and materials have resulted in a more varied classroom experience, but teachers are not teaching the higher-order skills described in the KERA goals. Also noted is a shortage of qualified principal candidates, particularly in rural areas.



According to the report, "The Kentucky General Assembly, Kentucky Board of Education, and Kentucky Department of Education have demonstrated a consistent commitment to improving education for all students, and to adjusting reform strategies based on feedback from schools." However, say the researchers, the job is far from complete. The report includes several recommendations for future action:

1. Re-emphasize the original intent of KERA—ensuring that each and every student achieves KERA goals and expectations—and incorporate it into every reform-related activity.
2. Examine the structure of teacher time. Teachers need time to learn about, reflect on, and implement new strategies. They also need time to meet with colleagues to examine student learning and to adjust curriculum and instruction to meet students' needs.
3. Consider expanding the accountability system in ways that motivate educators to focus on helping each individual child reach challenging goals.
4. Provide school councils with guidelines and professional development that will increase their effectiveness in improving curriculum, instruction, and student learning.
5. Explore strategies to identify, recruit, and assist local educators in obtaining principal certification.

Notes from the Field: KERA in the Classroom gives a preview to findings from a 10-year study. It includes a history of the Kentucky Education Reform Act and its primary components. A full report of the work will be available late this summer. The preview report is available on the Web at http://www.ael.org/rel/policy/note2000.htm or by contacting AEL at 800-624-9120.

See inside for ordering information.

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Resources Available from AEL

Some documents can be downloaded from our Web site (http://www.ael.org). Look for this symbol: Ⓦ

___ A Guide to Gender Fair Education in Science and Mathematics (1998)

This publication presents information gathered from the research and programs developed by hundreds of teachers and researchers in the field of education equity. Highlighted activities are examples of programs supported by the U.S. Department of Education and National Science Foundation, as well as states, counties, and cities. It includes an annotated bibliography of programs for girls in grades K-12. $15; 40 pp.

___ Briefs for Parents Ⓦ

These sets of six articles are ready to cut and paste into your newsletter, newspaper, or periodical. Each addresses a child development or education topic of concern to parents. They are available free (limit one copy of each set per order). Check the set(s) you wish to receive. Free.

___ Brief articles for a general audience of parents (English only)

___ Spanish language brief articles for parents (with English translations) 1999 edition, by Alicia Sosa

___ Charter Schools: The Perspective from AEL's Region (1999) Ⓦ

This issue of *Policy Briefs* discusses the status of charter school legislation in Kentucky, Tennessee, Virginia, and West Virginia; regional concerns for policymakers; and the effect of federal criteria on funding. The brief describes charter school operation and governance, summarizes research about their effectiveness, and identifies issues policymakers must consider when framing charter school legislation. $2; 8 pp.

___ Creating Safe Rural Schools (1999)

In this videotape, educators who have designed and implemented safety programs at the state, district, and school levels suggest ways to create safe rural school settings. $15; 58 minutes.

___ Curriculum Snapshots (2000) Ⓦ

This publication provides glimpses into the classrooms of real teachers at various stages of technology integration. The snapshots illustrate appropriate and creative uses of technology at all grade levels and within different subject areas. Contributing teachers name useful software and hardware as well as supplementary resources. $10; 108 pp. Access to the companion Web site (http://ael.org/snapshot) and downloadable documents is free. The Web site offers educators a searchable database of lesson ideas and information on how to submit their own.

___ Dissolving the Boundaries: Planning for Curriculum Integration in Middle and Secondary Schools (1999 revision)

This publication helps secondary school faculties prepare for curriculum integration through a four-step process. The recent revision integrates technology use into the curriculum units. Book with 78-page facilitator's guide, $31; single or additional copies of book, $16; 83 pp.

___ Distance-Based and Distributed Learning (2000)

As more school districts and education institutions explore distance-based learning, they need to know what to think about as they determine if and how to design or acquire courses. This easy-to-use decision tree can help. $2.

Educational Software Use: Results from a 1999 Regional Survey (1999) Ⓦ

A look at how teachers in Kentucky, Tennessee, Virginia, and West Virginia use software. Also includes a review of research on technology use and descriptions of software types. Go to http://www.ael.org/rtec.

___ Factors Influencing the Effective Use of Technology for Teaching and Learning (1999) Ⓦ

Schools and districts that want to improve their technology programs can benefit from lessons learned during three years of technical assistance and professional development to schools. The SouthEast and Islands Regional Technology in Education Consortium (SEIR*TEC), in which AEL is a partner, also shares success stories in this booklet. Go to http://www.ael.org/rtec/index.htm. Free; 12 pp.

___ Family Connections Parent Notebook

The *Family Connections* learning guides are now offered in a notebook for parents. The colorful learning guides are available in three volumes: *Family Connections 1* is for families of preschool children, *Relaciones Familiares 1* is the Spanish-language version, and *Family Connections 2* is for parents with kindergarten children. Each notebook contains a set of 30 four-page guides, plus tips for using them. $14.95 each ($11.95 without 3-ring binder).

___ Graphing Calculators in Mathematics Grades 7-12 Ⓦ

This resource guide offers a series of lessons covering a wide variety of mathematical concepts and topics. Planned for teachers with no experience with graphing calculators and for those who have used the instruments since their inception, these lessons emphasize hands-on, problem-solving approaches, with connections to science and the real world. $39; 250 pp.

___ In Accord with Nature (1999)

In Accord with Nature demonstrates how educators and youth leaders can help middle-school-age and higher level students understand and define their relationship to nature and learn the importance of protecting the environment. Alternative teaching strategies and structured activities will connect students with the natural and the built worlds. $19; 192 pp. (ISBN 1-880785-20-X)

___ K-8 Building Blocks for Algebra (1998)

Recent research about the human brain supports what teachers have long observed: students learn by fitting new information with what they already know. This publication provides teachers with activities that bring the real world into the classroom and help children make sense of the relationships between numbers. $18; 108 pp.

___ Local School Improvment Council Kit (1999 revision)

An information handbook, a facilitator's manual, and a videotape that provide information and team-building activities. It can be used as a workshop for all council members or as information resources by individual members. Specific to West Virginia codes and policies. $25.

___ Next Steps: Research and Practice to Advance Indian Education (1999)

Editors Karen Gayton Swisher and John W. Tippeconnic III asked a dozen indigenous scholars and practitioners to help answer such questions as What is "Indian education" today? and How will it look in the future? The essays they received help readers explore the issues that face educators who work with indigenous students. $28; 317 pp. (ISBN 1-880785-21-8)

___ Notes from the Field: Evolution of the Primary Program in Six Kentucky Schools. Vol. 6, No. 1 (1998) Ⓦ

In this issue, researchers examine the development of the primary program in six rural Kentucky elementary schools, which they studied

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for eight years. This report is based on the entirety of the research, but the most detailed description comes from the 1996-97 school year, when researchers narrowed the focus of their work to the class of 2006. $2; 12 pp. plus 8-page supplement.

___ Notes from the Field: KERA in the Classroom. Vol. 7, No. 1 (2000) (W)

In this issue, researchers present findings and recommendations based on the analysis of school and classroom data gathered during AEL's 10-year study of four school districts. Available free on-line.

___ Preventing Antisocial Behavior in Disabled and At-Risk Students (1996)

This issue of *Policy Briefs* focuses on children with ADHD and learning disabilities, presents a model that promotes prosocial behavior, and suggests considerations for practice and policy making. $2; 12 pp.

___ Principal Connections (2000)

This CD-ROM and companion Web site are designed to help school leaders recognize, promote, and evaluate effective technology use. Leaders can work at their own pace to examine their roles as technology leaders, identify barriers to technology integration, learn strategies to help teachers accept technology, make informed decisions about allocating technology resources, and more. $99. The Web site (http://www.principalconnections.org) provides supplementary and updated materials related to the CD-ROM, monthly software reviews and FAQs, a user poll, and links to sites of interest to technology leaders.

___ Reaching Out: Best Practices for Educating Mexican-Origin Children and Youth (1999)

Harriet Romo of the University of Texas at Austin describes successful approaches to improving outcomes for this growing population of U.S. students. $24; 232 pp. (ISBN 1-880785-22-6)

___ Recruiting and Training Volunteer Tutors of Emergent and Beginning Readers (1998)

This manual identifies characteristics of effective tutoring programs; suggests ways to recruit tutors and select the students they'll work with; presents a model for conducting tutor training sessions; and provides activities tutors can use to help readers with comprehension, word study, and writing activities.

___ Trainer's package (includes 90-minute video, 64-page manual, and 15 activity cards). $225.

___ Tutor's package (includes 64-page manual and 15 activity cards). $30.

___ School-Based Programs to Promote Safety and Civility (1998) (W)

Now several rigorous studies of antiviolence programs provide information to help schools and policymakers select methods that may work for them. This issue of *Policy Briefs* focuses on more than 20 primary and secondary level programs, all of which get a thumbs-up from researchers. Complete contact information is provided for each program. $2; 12 pp.

___ Schools for Disruptive Students: A Questionable Alternative? (1998)

Recent safe-schools legislation and commitments to provide safe learning environments have prompted states to create alternative schools for disruptive students. This issue of *Policy Briefs* reviews research and suggests indicators policymakers can monitor to judge the effectiveness of alternative school legislation. $2; 8 pp.

___ Standards Implementation Indicators: Charting Your Course to High Achievement (2000)

An easy-to-use tool to help school leaders look at their progress toward standards-based instruction. Includes six indicators, a profile chart, and a planning form. $14.95.

___ The ABC's of Parent Involvement (1998)

The ABC's of Parent Involvement in Education: Preparing Your Child for a Lifetime of Success offers information, inspiration, ideas, and expert advice to parents with children of all ages. AEL's Family Connections staff contributed early childhood knowledge. 134 pp. Single copies are $3, and a box of 50 costs $70 east of the Mississippi or $75 west of the Mississippi, shipping included.

___ UnCommon Knowledge: "The Voices of Girls" Documentary (2000)

Girls from one of the poorest rural counties in the United States surprised their families, teachers, and even themselves when they set out on a three-year exploration of the science and mathematics of everyday life. See the powerful impact the Voices of Girls project, funded by the National Science Foundation and operated by AEL, had on everyone involved. Filmed by John Nakashima and Charles "Chip" Hitchcock. Videotape. $15; 57 minutes.

UnCommon Knowledge: Guides for Hands-on Science and Math (2000) (W)

Volume One includes "Eyes on Herbs: The Science of Folk Medicine and Natural Dyes," "Food for Thought: The Science of Nutrition," and "The Science of Food Preservation: Crocked Cabbage, Jerked Beef, and Pickled Pigs' Feet." Volume Two contains "Pieces of Mine: The Mathematics of Quilting" and "Crafty Mathematician: Making Art through Mathematics." The project guides are free and available only from the ERIC pages of AEL's Web site at http://www.ael.org/eric.

AEL Information (free)

__ Interdisciplinary Teamed Instruction—professional development to help school teams plan integrated courses, units, and lessons

__ QUILT—Questioning and Understanding to Improve Learning and Thinking—a nationally validated, research-based professional development program

Information Search Packages

These are excellent references for policymakers, parents, and the public. Included are reprints of articles from journals, newsletters, and periodicals; ERIC Digests; an ERIC search; and information about AEL-produced materials and other resources.

___ **Block Scheduling (1996)** $15; 142 pp.
___ **Finding Answers to School Violence (1999)** $30; 272 pp.
___ **Technology in Education (1998)** $15; 136 pp.

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the Chicago Child-Parent Centers on early school dropout at age 18. The Chicago program offers educational and family support services for about 5,000 children per year, in preschool through second or third grade in Chicago's poorest neighborhoods. The program is designed to help preschoolers start school ready to learn, and perform better academically once they are in school.

This analysis is part of a larger longitudinal study of the Chicago Centers that includes a matched comparison group of children who participated in an alternative early childhood program. Given that high school graduation is a major predictor of socioeconomic status and earnings capacity, findings from this investigation can inform the design and evaluation of early childhood programs.

The three major research questions and related study findings include the following:

Is participation in the Child-Parent Centers associated with a lower rate of high school dropout by age 18?

Yes, the study found that participants in the Chicago Child-Parent Centers were less likely to drop out of school by age 18. Overall, 27% of the preschool participants dropped out by then, compared to 35% of the non-preschool participants. Further analyses have revealed that the estimated effect on high school dropout rate is significantly greater for boys than for girls.

Do the timing and duration of program participation significantly contribute to the prediction of high school dropout?

Yes, the children with the lowest rates of school dropout entered the program at age 3 or 4 and participated for 5 or 6 years (preschool to third grade). Their rate of school dropout was 23% compared to 33% for children with no participation in the program and 28% for children with any participation (1 or more years).

Which non-intervention variables contribute to high school dropout rates?

Student mobility, grade retention, and parental involvement were all found statistically significant predictors of dropping out. Each school move increased the probability of dropping out by 5% and each grade retention increased the probability by 10%. Girls (25%) had a significantly lower rate of dropout than boys (35%) and this difference occurred across all program comparisons.

Reynolds, A. J. *Success in Early Intervention: The Chicago Child-Parent Centers.* Lincoln, NE: University of Nebraska Press, in press.

Reynolds, A. J., Ed. "Schooling and High-Risk Populations: The Chicago Longitudinal Study." *Journal of School Psychology* 37(4) (1999).

Reynolds, A. J., Miedel, W. T., and Mann, E. A. "Adopting Innovation in Early Childhood Education: Lessons from the Chicago Child-Parent Centers." *Young Children*, in press.

Temple, J. A., and Reynolds, A. J. "School Mobility and Achievement: Longitudinal Findings from an Urban Cohort." *Journal of School Psychology*; 37(4), 355-377 (1999).

For information on the study, e-mail Oliver_Moles@ed.gov. For copies of the publication, e-mail jtemple@niu.edu

Preschool Programs Affect Rural Drop-out Rate

From 1968 to1971, AEL conducted a preschool education project called Home-Oriented Preschool Education (HOPE). Intended to provide parents and children with information and skills that would assist school readiness, the HOPE field experiment followed as many participants as possible throughout their K-12 schooling. Findings in the early years showed HOPE children coming into kindergarten better prepared than many of their peers, regardless of ability level or socioeconomic status.

In later years, grade failure and graduation rates of HOPE children were compared to predicted outcomes for children outside the program. While the general population of children experienced a 22% rate of failure in at least one grade, only about 9.8% of the HOPE children were ever held back. The general graduation rate was just below 73%; HOPE students achieved an effective rate of more than 87%.

These results with rural children, when considered in conjunction with the Chicago study's urban results, reinforce the importance of well-designed preschool programs to student success.

Gotts, E. E. *HOPE Revisited: Preschool to Graduation, Reflections on Parenting and School-Family Relations.* Charleston, WV: AEL, Inc., 1989. ERIC Document Reproduction Service No. ED 305 147.

Grant Opportunities

Guide to Funding Opportunities

The U.S. Department of Education has created an on-line guide to funding opportunities in 19 programs. The *Promising Initiatives to Improve Education in Your Community* site also describes exemplary projects and includes links to related resources. Visit the site at http://www.ed.gov/pubs/promisinginitiatives.

Computers for Learning Program

In order to ensure that American children have the skills they need to succeed in the 21st century, this program streamlines the transfer of excess federal computer equipment to schools and educational nonprofit organizations.

All public, private, parochial, and home schools that serve pre-kindergarten through grade 12 students are eligible to receive equipment, with preference given to those located in empowerment zones and enterprise communities or that demonstrate the greatest need.

(continued on page 9)

Federal Programs

Class-Size Reduction Program

Purpose: To help school districts hire and train teachers to reduce class size to a national average of 18 in grades 1-3.

States must apply for formula-based funding, then school districts will apply to states. Funds will be provided for teacher recruitment, hiring, and training; for new teachers to take competency tests; and for professional development.

Deadline: Mid-May 2000 (states apply for funds by this date; district deadlines will be announced by state agencies)

Application information available on-line at http://www.ed.gov/offices/OESE/ClassSize, by phone from Robert Stonehill at 202-260-8228, or by e-mail at classsize@ed.gov.

Elementary School Counseling Demonstration Program

Purpose: To establish or expand counseling programs in elementary schools.

Grants will be given to local education agencies that demonstrate the greatest need, propose the most innovative and promising approaches, and show the greatest potential for replication and dissemination.

Grants are expected to average from $325,000 to $400,000.

Deadline: June 2000

Application guidelines and information available on-line at http://www.ed.gov/offices/OESE/SDFS, or contact Loretta Riggans by e-mail at Loretta_Riggans@ed.gov or by phone at 202-260-2661.

Smaller Learning Communities Program

Purpose: To provide competitive grants for local education agencies to plan, develop, and implement smaller learning communities for students in large high schools.

LEAs may submit applications on behalf of individual high schools with enrollments of 1,000 or more students or to fund districtwide programs.

One-year planning grants will range from $25,000 to $50,000; three-year implementation grants will total $250,000-$500,000 per project.

Deadline: July 2000

Application information is available on-line at http://www.ed.gov/offices/OESE/SLCP, or contact Jeff Wilde at 202-260-1475.

Foundations

Toshiba America Foundation: Grades 7-12 Science Education

Purpose: To contribute to the quality of science education by investing in projects designed by and with classroom teachers.

Priority will be given to submissions from individual or groups of classroom teachers that present programs, projects, and activities that have the potential to improve classroom teaching and learning of science, mathematics, and the science and mathematics of technology.

Grant awards range from $4,000 to $9,500.

Deadline: Open

Application guidelines and information available on-line at http://www.toshiba.com/about/taf/grant.html, by e-mail at foundaton@tai.toshiba.com, or by phone at 212-588-0820.

The For All Kids Foundation

Purpose: To support at-risk and disadvantaged children by funding nonprofits that provide child care, health care, education, and other programs in underserved communities.

Preference is given to organizations that provide direct child care services. Grants may be awarded to child care centers for tuition scholarships, improving facilities, and upgrading equipment and also to help retain teachers and child care professionals who have demonstrated proficiency.

Deadline: Open (funds are disbursed in February and September)

Application information available on-line at http://rosieo.warnerbros.com/cmp/allkids/grant.htm or by mail from The For All Kids Foundation, P.O. Box 225, Allendale, NY 07401.

Other

Hobby Industry Association: Creative Lesson Plan Contest

Purpose: To expand hands-on learning when teaching core curriculum.

Educators may submit a lesson plan for grades K-8 that incorporates crafting and core curriculum.

First prize is a $500 gift certificate for school craft supplies; honorable mentions will receive $50 certificates.

Deadline: July 1, 2000 postmark

Mail entries (finished lesson plans) to NCM Lesson Plan, P.O. Box 217, Rockaway, NJ 07866. More information available on-line at http://www.i-craft.com/teachers/contest.html.

gURL.com: gURL Grants

Purpose: To help teenage girls explore and pursue their creative and intellectual interests in an in-depth way.

Grant requests can include such special projects as educational programs, summer camp, travel expenses, or equipment and materials to conduct a project. No previous experience in the area of interest is required. Winners will be expected to present a description of the project to the gURL.com Web site.

Grants start at $1,000 and may go as high as $3,000.

Deadline: July 1, 2000, for fall grants

Application available on-line at http://www.gurl.com/grants.

National Gardening Association: Youth Garden Grants

Purpose: To encourage children to directly learn and work in an outdoor garden.

Schools, neighborhood groups, community centers, camps, clubs, and intergenerational programs may apply. Groups must plan to garden in 2001 with at least 15 children between the ages of 3 and 18 years. Selection criteria include leadership; need; sustainability; community support; innovation; and educational, environmental, and/or social programming.

Grant awards consist of an assortment of tools, seeds, and garden products valued at more than $750.

Deadline: November 1, 2000

Application available on-line at http://www.garden.org/edu/nga-edu6.htm or by phone at 800-538-7476.

(continued from page 8)

To apply for donated computers, visit the Computers for Learning Web site at http://www.computers.fed.gov and register your school. If the school does not have Internet access, designate someone who does to register on the school's behalf or register by phone with the Computers for Learning Administrator at 202-501-3846.

At the Web site, use the technology tutorial to assess the suitability of available computer equipment and find out how to contact volunteers who can help with upgrading computers.

The only cost to a school may be for shipping, however, a number of transportation systems and movers belong to the Computers for Learning Partnership and may provide free shipping. The Partnership Web site is at http://hhgfaa.org/partnership. By phone, contact the program Administrator at the number shown above.

Publications of Interest

Summer Reading

With education being such a hot topic, many books are appearing on library and book store shelves. Here are some that might be included on educators' reading lists.

- *The Students Are Watching: Schools and the Moral Contract* by Theodore R. Sizer and Nancy Faust Sizer
- *The Educated Child: A Parent's Guide from Preschool through Eighth Grade* by William J. Bennett, Chester E. Finn, Jr., and John T. E. Cribb, Jr.
- *The Big Test: The Secret History of the American Meritocracy* by Nicholas Lemann
- *The Schools Our Children Deserve: Moving Beyond Traditional Classrooms and Tougher Standards* by Alfie Kohn
- *Intelligence Reframed: Multiple Intelligences for the 21st Century* by Howard Gardner
- *Lessons of a Century: A Nation's Schools Come of Age* by the reporters and editors of *Education Week*

High Stakes Testing

The High Stakes of High Stakes Testing, a policy brief from WestEd (http://www.wested.org), addresses both the benefits and concerns raised by the growing use of high stakes testing. It offers specific recommendations for policymakers wishing to incorporate these tests in state accountability systems.

Assessment Resources

Two new products have been created by the Assessment Lab Network Program, in which AEL participates. The *Assessment Software Database* includes descriptions of electronic grade books, test generators, resource assistance, electronic portfolios, and more. Information on program features, specifications, implementation issues, and vendors is provided with each entry.

The *Promising Practices in Assessment Database* contains a variety of high-quality, assessment-focused materials developed by the 10 regional educational laboratories. The lab-created materials include toolkits, assessment instruments, how-to guides, research papers, audio and videotapes, and more.

Both databases can be accessed from the Assessment Core Work Team home page at http://www.wested.org/acwt.

Education Research and Promising Practices

The Office of Educational Research and Improvement (http://www.ed.gov/offices/OERI) recently unveiled its overhauled Web site. It includes a topical index of links to education research; news about OERI-supported research, publications, and funding opportunities; education improvement activities; library and information services; and more.

Research Reports from the National Research and Development Centers (http://research.cse.ucla.edu) links to more than 600 research reports on education issues from 12 national research and development centers funded by OERI. Reports are often available here before appearing in print.

The Knowledge Loom (http://knowledgeloom.org) provides a searchable collection of promising practices on a range of topics. Special features, such as one on professional development, present research-based practices and examples of those practices in real schools. Users may participate in a panel discussion, ask questions of an expert, and post ideas or stories.

Math and Science Challenge for 8th Graders

Eighth-grade students can compare their performance in math and science to that of their peers worldwide on an interactive Web site that presents a version of the Third International Mathematics and Science Study. Developed by the Council on Competitiveness, the Internet Learning Network site (http://www.getsmarter.org) is in its "beta" phase. Feedback for improving the site and guiding its development is requested (using forms at the site).

Reading Panel Report

On April 13, the National Reading Panel released its report on scientific research-based reading instruction and its readiness for application in the classroom. The report outlines the most effective approaches to teaching children to read, the status of the research on reading, and reading instruction practices that are ready to be used by teachers in classrooms across the country. Secretary Riley welcomed the addition of this report "to the growing body of knowledge about the teaching of reading." He noted that the "report supplements the solid

foundation presented by the National Research Council" by reinforcing the call for a balanced approach to reading instruction: "This is further evidence that the reading wars are over." *Report of the National Reading Panel: Teaching Children to Read* is available on-line at http://www.nichd.nih.gov/publications/nrppubskey.cfm.

Math Standards on CD-ROM

The Eisenhower National Clearinghouse for Mathematics and Science Education (ENC) has issued a CD-ROM set of the full text and graphics of the National Council of Teachers of Mathematics Curriculum and Evaluation Standards. Also included are standards from several states and content from ENC publications. Schools may receive one free copy; contact the Clearinghouse by phone 800-621-5785, fax 614-292-2066, or e-mail info@enc.org.

On-line Technology Journal

Join policymakers, strategists, practitioners, and technologists for an international discussion taking place on the cyberpages of *TechKnowLogia, International Journal of Technologies for the Advancement of Knowledge and Learning.*

The March/April 2000 issue features a theme of access to information and knowledge. (January/February was devoted to technology and higher education.)

TechKnowLogia is published by Knowledge Enterprise, Inc., in collaboration with the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Organization for Economic Co-operation and Development (OECD). Subscriptions are free—sign up at http://www.techKnowLogia.org.

> "It is necessary but not sufficient to provide avenues to information and knowledge. What is more important is to empower people with appropriate educational, cognitive and behavioral skills and tools to access... acquire...apply...and upgrade their knowledge continuously and systematically."
>
> —Wadi D. Haddad, Editor
> "Is the Divide Digital" in
> *TechKnowLogia*, March/April 2000

Instructional Strategies

Ridding Math Word Problems of Language Barriers

By Elizabeth Lanou

It's a nearly universal experience—sitting in math class wondering how to solve a complex word problem.

Imagine how much more difficult it must be for students with limited English proficiency. Some of these students may have had limited or interrupted schooling in their native countries, and now find themselves in a linguistically and culturally unfamiliar environment. They must construct understanding without the previous knowledge their classmates employ.[1]

Some students who are learning English as a second language may know a written language that uses symbols and characters rather than numbers and letters—their experiences with word problems may be very different from those of Americans. Some students may not be familiar with incorporating abstract concepts to solve word problems, and others have simply had no experience with word problems.

Teachers face the challenge of helping all students to overcome the fears, anxieties, or obstacles mathematical word problems present. Part of this challenge lies in teaching the students how to best comprehend the problems. Understanding and solving problems is an important real-world skill to acquire.

Fortunately, there are teaching strategies that work. Whether their students are culturally and linguistically diverse or simply find math difficult, teachers can take some of the pain out of solving word problems.

- Choose relevant contexts in which to incorporate mathematical calculations.[2]

(continued on page 12)

Notes: Math Problems

1. K. Buchanan and M. Helman, *Reforming Mathematics Instruction for ESL Literacy Students.* (Washington, DC: U.S. Department of Education, 1997). http://www.ed.gov/databases/ERIC_Digests/ed414769.html (5 January 2000).
2. S. Celedon-Pattichis, "Nine ESL Students' Think-aloud Protocols on Five English and Spanish Word Problems." Paper presented at the meeting of the National Council of Teachers of Mathematics, Research Presession, Chicago, IL, April 2000)
3. See note 1 above.
4. See note 2 above.
5. See note 1 above.
6. See note 1 above.

Math Anxiety

(continued from page 11)

Elizabeth Lanou is a graduate assistant at AEL•Arlington; she is working on a Masters in Education at George Mason University.

The problem will be less intimidating if the student can apply prior knowledge. Although textbooks don't normally incorporate word problems into contexts, thematic units can do this.

- Be cautious with the use of abstract concepts. They may be difficult for students, especially those who come from cultures that use concrete concepts rather than abstract ones.
- Help students grasp the problems by putting them in their own words. This can be done in small groups or whole class discussions.[3]
- Simplify the word problems by highlighting the main words and important ideas. Organize data logically.[4]
- Use manipulatives. Tools such as Cuisenaire rods, which use different colored rods to help students separate data, are powerful because they enable the students to literally see how data piece together.
- Access prior knowledge.[5] Use pictures to elicit meanings of words.

Educators who work with culturally and linguistically diverse students consider their specific needs as they design a mathematics curriculum.[6] Selecting strategies that address these needs can help every student in the classroom become more proficient. For more classroom strategies, consult the resources listed at left.

Resources

Eisenhower National Clearinghouse for Mathematics and Science Education http://www.enc.org

Center for Research on Education, Diversity & Excellence
http://www.crede.ucsc.edu

Center for Research on Cultural Diversity and Second Language Learning
http://www.ncbe.gwu.edu

ERIC Clearinghouse for Science, Mathematics, and Environmental Education
http://www.ericse.org

Help! They Don't Speak English
http://www.ael.org/cac/helpkit.htm
An excellent source of teaching strategies, lesson plans, and materials to help busy primary teachers more effectively include, instruct, and nurture LEP students. Most strategies promoted here are recommended for all students, not just LEP students.

AEL is a private, nonprofit corporation. AEL serves as the regional educational laboratory for Kentucky, Tennessee, Virginia, and West Virginia. For these same four states, it operates both a Regional Technology in Education Consortium and the Eisenhower Regional Consortium for Mathematics and Science Education. In addition, it serves as the Region IV Comprehensive Center and operates the ERIC Clearinghouse on Rural Education and Small Schools. AEL's primary source of funding is the Office of Educational Research and Improvement (OERI), U.S. Department of Education. This publication is produced with funds from OERI contract number RJ96006001. The contents herein do not necessarily reflect AEL or OERI policies or views.

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Linking the knowledge from research with the wisdom from practice to improve teaching and learning

Vol. 19, No. 3

THE LINK

A PUBLICATION FOR EDUCATION PRACTITIONERS

Serving educators in Kentucky, Tennessee, Virginia, and West Virginia since 1966

School Improvement

Once Upon a Time: Telling the Story of Comprehensive School Reform Research

Since late 1997, when Congress created the Comprehensive School Reform Demonstration program (CSRD), educators, researchers, and members of the public have been looking for signs of its success. With most CSRD schools only one or two years into implementation, definitive answers to sustainable reform may be a few years away. Yet the program has drawn a great deal of attention and spawned a parallel comprehensive reform movement.

In June, education researchers met with representatives of professional education associations, the U.S. Department of Education, and regional educational laboratories at the Second Annual Symposium on Research and Evaluation Related to Comprehensive School Reform.

Goals were for researchers to share "an increased knowledge about current research, a sense of direction for sustaining a network of researchers, and a potential agenda for future research." Discussions revealed recurring themes—the importance of school readiness, the need for better communication, the influence of political strongholds, and the importance of strong individual and structural leadership.

A brief summary of the discussions follows.

Time, energy, and money—large quantities of each are being poured into the comprehensive school reform movement. What do we have to show for these efforts, and how can research support successful, sustainable school reform?

More than 75 symposium participants convened in Washington, D.C. to address these questions from several perspectives.

Findings and Implications for Research

The classroom. Researchers need to focus more on how classroom activities affect

(continued on page 2)

IN THIS ISSUE

Research Notes
Improving K-12 Writing Programs; 21st Century Literacy; Leading for Diversity, p. 4

Announcements and Information
All Children Can Learn; Improving America's Schools; AEL Offers Onward to Excellence, p. 6

New Resources from AEL
Using Technology Effectively; Introducing Project-Based Learning; Curriculum+ Standards=Confusion?; Supporting Children with ADHD, Insert/Order form

Grant Opportunities
Federal, Foundation, and More, p. 8

Publications of Interest
Education Statistics Available; Support for New Teachers; Science Education Examined; Multimedia Tutorials; Learning about Student Assessment; Promoting Positive Behavior: Ideas That Work; Strategies for Implementing Reform; Building Better School Leaders, p. 10

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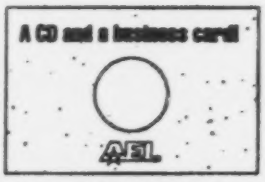

See page 7 for a CD-ROM that will introduce you to AEL in a fun, new way.

The Link is free to educators in the AEL region. Readers are encouraged to reproduce its contents, giving proper credit. On request, AEL will provide camera-ready copy on white paper. Current and many back issues are available in PDF at http://www.ael.org.

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Highlights of Recent Research

Researchers at the symposium responded with the following when asked about striking or significant findings from their work.

- Adoption of a model does not guarantee implementation.
- Decision makers rarely seek research-based information to guide their choices about comprehensive school reform.
- Schools do not know the right questions to ask to help them determine whether the reform model they choose fits with other school or district initiatives.
- Intensive in-school assistance, such as the use of master teachers, helps ensure changes at the classroom level.
- Reform planners in the 1990s seriously underestimated the political and technical problems of assessing the effects of standards—test scores mean everything in too many places.
- Teachers who embrace technology are more likely to implement reforms. Unfortunately, many reform efforts incorporate surprisingly little technology.
- Reform has often been a "two-way street"—reforming schools have

(continued on page 3)

Telling the Story of CSR Research

(continued from page 1)

reform. They could start by asking, What is the nature of the teaching/learning relationship across models? Research also needs to consider the socioeconomic impact of reform, look at gender equity issues, and determine whether students with disabilities and poor, minority, and English as a second language (ESL) students have equitable access to resources, including teachers.

Teaching quality. Research indicates that teaching quality is the primary factor influencing student achievement; therefore, preservice programs must take more responsibility in preparing teachers and principals for the new skills demanded by comprehensive school reform. Research about higher education's role in preparing future educators for reform is needed.

School level. Although CSRD schools are required to conduct formative evaluations, many other reforming schools are not doing so. Researchers need to promote evaluation at the site level, where comprehensive school reform succeeds or fails.

Needs assessments can also be improved. Frequently, they are used once and discarded. Researchers need to isolate the most effective questions and create more concise needs-assessment instruments, which would be more useful to practitioners.

Political realities. Researchers need to learn more about the politics of reform and education. Schools currently have a certain amount of input into the selection of a reform model, but some researchers fear that schools in the future will be pressured into selecting a particular model merely because it has produced positive results elsewhere. This possibility raises an important question: Are locally selected models more or less successful than models mandated by state officials?

Accountability. While political reality makes student test scores the bottom line, standardized tests should not be the only measure of whether comprehensive reform is succeeding. One participant pointed out that reform efforts do not produce immediate changes in student test scores, so researchers or others should develop common benchmarks to assess outcomes during the early implementation years.

Translating Research into Practice

Effectively communicating education research findings to practitioners remains an ongoing problem. The first step is to develop a good synthesis of research. Then, a "translator"—a consultant, perhaps—can apply the synthesis to real-world problems.

Researchers must develop closer ties with educators and policymakers to determine the kinds of information these groups are looking for. Researchers, teachers, and policymakers should collaborate more.

Researchers have a large body of evidence about the implementation and effects of comprehensive school reform, and their responsibility to the education community is to convey findings in a clear, objective, and timely manner.

Factors That Affect Success

School level. Before selecting a reform model, schools need to decide how much time and energy they are able and willing to commit to school improvement. Schools that are not functioning well (e.g., those that lack certified teachers or experience a high rate of student or staff absenteeism) may not be fully prepared to implement reforms. In schools that *are* ready to launch new efforts, the entire staff should be involved early in planning and decision-making. This is the best way to ensure staff buy-in of reform goals—a vital condition of success.

The principal must continually encourage and support faculty as they work together to make changes. One of the principal's leadership responsibilities is to keep everyone focused on the purpose of the reforms. High staff turnover from year to

year, often associated with low-performing schools, can disrupt focus and affect buy in. The high turnover rate of principals nationally has prompted some schools to create partnerships among the school, district, board, and, if appropriate, local teachers' union, to keep reform efforts from being derailed. Additionally, the role of on-site facilitators in supporting and stabilizing comprehensive reform is now being studied.

District level. The entire school community creates the reform vision, however, the superintendent must ensure that the reform effort remains focused on student achievement and the initial goals.

The superintendent, probably more than any other individual in the school system, bears the brunt of political and economic pressure from the school board. This, in part, has led to a high turnover rate among superintendents (national average is two to three years) and leadership vacuums in many school districts.

Model developers. Model developers should help schools understand the underlying goals and rationales of their models, identify the resources needed to fully implement specific reforms, set realistic expectations for programs, and establish measurable goals. Developers and schools must understand that CSR is a whole-school effort and cannot omit components such as parent and community involvement.

Developers could further support implementation by assisting teachers directly and working more closely with colleges and universities to introduce preservice training that addresses the demands of specific models. They could also establish support networks for in-service teachers involved with a particular reform model.

Supporting Schools through Comprehensive Reform

On the second day, participants met in role-alike groups to determine how each might contribute more effectively to the CSR initiative.

Researchers. School districts must determine for themselves which model best suits their needs—looking beyond the "sales talk" to ascertain which components have the greatest potential to improve student performance in their schools. Researchers can engage districts in a critical inquiry process and assist them in building capacity. Specifically, researchers can help districts determine what *success* means to them, define how different components of a model fit into a comprehensive reform program, and establish data-driven formative evaluation processes to assist decision making.

Researchers need to communicate their findings more effectively. The group suggested that on issues supported by compelling research findings, researchers should move beyond objectivity to assume an advocacy role with schools, districts, state legislatures, Congress, and the federal government. This would require better communication and coordination among researchers. The group also identified effective communication within the school system as desirable support for reform efforts.

Professional education associations. The vast array of organizations represented at the symposium should direct their constituents to a set of common resources, agree upon messages, and collaborate to develop products that address these points. Again, it is important to tailor the messages and products to specific audiences. To develop more consistency and timeliness in the dissemination of research, the National Clearinghouse on Comprehensive School Reform offered its Web site for organizations to post research and information.

The group outlined several teacher training objectives that could help sustain reform: assist teachers in thinking about improving their schools as organizations, create celebrations for the successful elements of reform, and network the teachers who are working on common reform issues, regard-

(continued on page 11)

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reshaped their districts as much as districts have affected schools.

- Many reforms and ystemic changes fail to ıcrease enrollment in dvanced math and science courses at the secondary level.
- Forming a network of schools that fall at different stages of the reform implementation continuum can help schools at both the highest and lowest levels. Employing a state-level coordinator can assist the networking process.
- Reforms *do* impact student achievement. One study of an inner-city district showed that schools implementing comprehensive reforms dramatically outgained schools not implementing reforms.

Guide to Working With Model Providers suggests ways schools can create and maintain effective working relationships with organizations providing reform assistance. Go to the U.S. Department of Education Web pages at http://www.ed.gov/offices/OESE/compreform/model.pdf.

Research Notes

The U.S. Department of Education's Office of Educational Research and Improvement funds research through regional educational laboratories, national centers, and field-initiated grant studies. Here are summaries of recent work in various areas.

"21st Century Literacy includes strong academic skills, thinking, reasoning, teamwork skills, and proficiency in using technology."

—21st Century Workforce Commission

Improving K-12 Writing Programs

In 1995, five years into implementation of the Kentucky Education Reform Act (KERA), educators and parents recognized the Writing Portfolio Program as one of the reform's most successful components. Yet, while Kentucky students were writing more than in pre-KERA days and, overall, scores on the state assessment were improving, performance varied widely among schools. Kentucky asked AEL to help discover what school conditions and practices appeared to be linked most strongly to writing improvement and then use that information to help other schools improve student performance. The fact that Kentucky's writing program was based on the National Writing Project (a CSRD model) means that the study results can have implications for writing programs everywhere.

The research team included AEL and Kentucky Department of Education Writing Program staff and regional writing consultants. They began by identifying K-12 schools with consistently improving and consistently declining writing portfolio scores. After selecting a representative sample from each group, team members developed processes and protocols for examining the schools' writing programs. The collaborative team visited 22 improving and 7 declining schools, interviewing more than 100 teachers, 200 students, and 50 administrators. They collected quantitative and qualitative data that helped them identify 36 features, or indicators, that are common to continuously improving schools. They then developed a rubric for scoring both improving and declining schools on the indicators.

The indicators reflect various areas of school practice. For example, this indicator reflects district support of the writing program: *the district demonstrates commitment by allocating resources to professional development or technical assistance, by assigning program oversight to qualified personnel and allocating sufficient time for effective oversight, by compensating cluster leaders through additional pay or release time, and in some districts by establishing policies requiring portfolio completion for promotion or graduation.*

Instructional strategy indicators include (1) *students write frequently in all subjects, and the writing is integrated into instruction;* and (2) *teachers in most grades and content areas give writing assignments that have the potential of contributing to students' writing portfolios.*

To help satisfy Kentucky's need for a process by which schools could assess their own writing programs, the instruments and processes used in the research phase were developed into a writing program self-study. The *School Study of Writing Instruction* was piloted and field-tested and is now being used by schools across Kentucky, assisted by more than 200 trained facilitators. Plans are being made to adapt the guide for national use.

The indicators and information about the project are available on AEL's Web site at http://www.ael.org/rel/state/ky/index.htm.

Questions about the research may be addressed to Sandra Orletsky at AEL (orletsks@ael.org) and copies of executive summaries of the project's three reports may be requested through Shirley Keene by e-mail (keenes@ael.org) or phone (800-624-9120).

21st Century Literacy

The 21st Century Workforce Commission, an independent body appointed by the President and Congress, was charged with examining and reporting on the knowledge and skills that individuals must have, and the educational and workforce development opportunities that must be available, to allow the greatest number of Americans to participate in the information technology (IT) workforce.

The commission's final report, *A Nation of Opportunity: Strategies for Building America's 21st Century Workforce,* includes

recommendations for developing the nation's new high-tech workforce. Drawing from field hearings, site visits, and existing research, the commission identified nine keys to success that can be implemented by stakeholders at all levels.

Keys to Success

1. Building 21st century literacy
2. Exercising leadership through partnerships
3. Forming learning linkages for youth
4. Identifying path ways into IT jobs
5. Increasing acquisition of IT skills
6. Expanding continuous learning
7. Shaping a flexible immigration policy for skilled IT workers
8. Raising student achievement
9. Making technology access and Internet connectivity universal

The report and accompanying materials provide an analysis of how leadership in regional partnerships of education, business, and government can address shortages of skilled IT workers. All materials are available on-line at http://www.workforce21.org. The final report may be ordered in print by e-mail at info@workforce21.org or by phone at 202-289-2939.

Leading for Diversity

From 1996 to 1999, researchers from the Center for Research on Education, Diversity & Excellence (CREDE) documented "the approaches of school leaders who are proactive in addressing racial/ethnic tensions in schools and in encouraging positive interethnic relations." The idea for the study emerged from a principals' forum where participants felt a need to learn about strategies that would help them reduce violence and tensions in their schools.

Researchers conducted qualitative case studies of 21 schools from different levels and geographic areas. To be chosen, each had to have (1) at least three ethnic groups, (2) a tangible history of interethnic conflict, and (3) leadership that was implementing innovative approaches to prevent conflict and improve relations. Data collected by the team included interviews with 1,009 individuals, observations of 441 classes and other school and community events, and relevant school documents and records.

Key findings from the study include:

- **School leaders have the power to influence race relations in a positive direction.** Proactive leadership resulted in such positive outcomes as increased academic achievement, improved student behavior indicators, increased staff collaboration, increased staff awareness about interethnic relations and diversity, and increased involvement of diverse parents.
- **Each incoming school leader steps into a d01t context that may hinder or support the development of positive race relations.** All schools in the study benefited from some contextual supports that made the development of positive intergroup relations more likely. Several schools had strong parent and community support, the small size of others made relationship building easier, and larger per pupil funding at some schools supported the development of programs in interethnic relations. District-level contexts ranged from diversity initiatives to drawing school boundaries that maintained diversity.
- **Proactive school leaders attend to underlying as well as overt conflicts.** The school leaders in this study tended to view overt conflicts, such as fights, as symptoms of tensions and root causes. They were able to develop activities and structures that built a stronger interethnic community.
- **Many other role groups besides the principal can lead efforts to improve interethnic relations.** Teachers, counselors, parents, students, community members, superintendents, and others contributed to achieving more equitable,

(continued on page 6)

"Although the study focused on race/ethnic relations, we assume there is an underlying commonality among all forms of intolerance and oppression, whether people are the subject of harassment because of race/ethnicity, gender, sexual orientation, physical disabilities, or any other kind of 'difference.'"

—Rosemary C. Henze

103 102

Announcements and Information

An Inside Look

Voices from the Field: Stories of Reform in the Words of Practitioners presents teachers' perspectives on and experiences with education reform (produced by the Northeast & Islands Regional Educational Laboratory). http://www.lab.brown.edu/public/voices/index.html

All Children Can Learn

National Conference on Kentucky's Education Reform: The First Ten Years

December 7-9, Lexington, Kentucky

Researchers and other experts who have been participating in the Kentucky reform experience will share lessons learned and suggestions for improving elementary and secondary education during this national conference sponsored by the Kentucky Institute for Education Research, with AEL and the Consortium for Policy Research in Education co-sponsoring.

Early registration, before November 5, is $295, which includes three meals and a copy of the book *All Children Can Learn*. Educators, policymakers, and researchers are invited to attend. Register on-line at http://www.uky.edu/AuxServ/conference.htm, send e-mail to conference@uky.edu, or phone Kathy McKinley at 859-257-3929.

Improving America's Schools

7th Annual Regional Conferences

October 2-4, Louisville, Kentucky, Central region (includes Kentucky and Tennessee)
December 13-15, Washington, DC, Eastern region (includes Virginia and West Virginia)

State and local teams are encouraged to attend the U.S. Department of Education's most in-depth and comprehensive conference on education reform. Participants will learn about coordinating federal programs, integrating federal programs with state and local efforts, accessing the technical assistance network, using resources to implement comprehensive school reform, and promoting equity and excellence in schools.

Registration costs $250 per person, with a special group rate of $210 per person for teams of four or more. To register or get more information, phone 800-203-5494 or go to http://www.ncbe.gwu.edu/iasconferences.

AEL Offers Onward to Excellence Reform Model

For nearly 20 years, Northwest Regional Educational Laboratory (NWREL) has been guiding schools on the path of continuously improved student achievement through Onward to Excellence (OTE), its research-based school change process. Recently, AEL became a partner—an OTE Regional Center—in the effort to make the program more widely available.

OTE II, a refined version of the original program, calls for shared leadership by involving students, parents, and community members in key decisions and uses research to enhance classroom practice. The program serves English language learners as well as Title I, rural, and urban students, and has already been implemented in more than

(continued on page 7)

Research Notes

(continued from page 5)

socially just, and respectful environments. By sharing leadership, efforts were not "owned" by any one group and had greater likelihood of being sustained.

- **Organizing themes such as personalization, non-violence, democracy, and community building serve as the "glue" that connects vision to concrete approaches.** Leaders of the study schools avoided the pitfall of having a "hodge-podge" of unrelated approaches. A thematic cluster proved much more than the sum of its parts and could reflect a school's particular values.

Leading for Diversity: How School Leaders Achieve Racial and Ethnic Harmony (Research Brief #6) by Rosemary C. Henze is available by mail from CREDE, University of California, College Eight, #201, 1156 High Street, Santa Cruz, CA 95064. Send e-mail to crede@cats.ucsc.edu or visit the Web at http://www.crede.ucsc.edu.

Using Technology Effectively

Patterns of Promise describes exemplary uses of technology in several schools in the southeastern United States. Educators throughout the region were invited to nominate programs that demonstrate effective uses of technology for instruction. A panel of experts chose the 12 most outstanding examples of technology use. Not all of these examples come from large, well-to-do urban or suburban schools; small rural schools and schools with a large percentage of students eligible for free or reduced-price lunch take creative and innovative approaches to using technology and finding funding.

Program descriptions are divided into three categories:

- programs that take a project approach to learning
- programs designed to increase teacher competence with technology
- examples of systemic change that are broad in nature and that offer a new paradigm for schooling

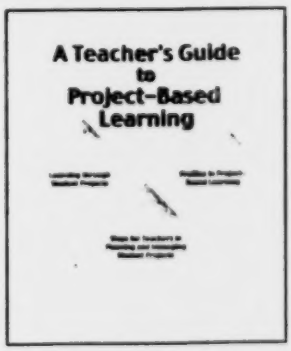
Author Larry Harris is Professor and Program Area Leader for Elementary and Literacy Education at Virginia Tech. His publications include several college textbooks and he consults as an evaluator for school systems and publishing companies.

This publication is Internet-enabled!

A digital watermark embedded in the cover art can be used to link this publication to AEL's Web site. As the first education entity to use this new technology, AEL is pleased to take part in introducing this exciting innovation.

Introducing Project-Based Learning

Fifth graders design Web pages that feature the biographies of senior citizens they have interviewed. Eighth graders create science museum exhibits and invite the community to see them. High school students write skits and produce videotapes that illustrate the effects of immigration.



These students do not attend expensive private schools; they have teachers who have tapped into the power of project-based learning.

Projects immerse students in interesting, real-world scenarios that connect personal interests and academic pursuits. Students involved in project work often learn to work with one another and with adults in the school and community. They learn to investigate a topic in depth and to communicate their findings to others. In the course of this work, they often discover hidden talents and develop new ones. Structured self-assessment and reflection enable them to evaluate and redirect their own efforts—abilities that will serve them well in the future.

A Teacher's Guide to Project-Based Learning introduces the ideas and methods that underpin project-based learning. Teachers who are new to planning and managing projects will find it particularly helpful as a starting point and resource guide. Within these pages are profiles for 13 different types of projects, a step-by-step planning guide, an annotated list of essential references and resources, and sample project plans from five classroom teachers engaged in project-based learning.

Projects are powerful learning tools. Open this book to learn more about how to put them to use in the classroom.

Curriculum+Standards=Confusion?

You need AEL's Curriculum Mapping and Alignment Program, now available to individual schools and districts on a subscription basis. It harnesses the power of the Web to make creation and alignment of curriculum and assessment easier than ever. The program provides an on-line resource for creating and aligning lesson plans with state and district standards. Through its focus on mapping at the activity level, it encourages teachers to determine the objectives of activities as they are entered. Completed maps show at a glance what is taught, when and how it is taught, how it is assessed, and what standards are addressed.

Administrators become instructional collaborators as they review and provide feedback on teachers' work. The print feature eases preparation of district- and state-level reports.

- Uses no special hardware or software; accessible from any Internet connection
- Updates automatically when standards change
- Includes school, district, and individual activities, units, and curriculum maps/plans
- Eases administrative review of curriculum and assessment
- Links activities to state and district standards, and assessments to activities
- Enables sharing and collaboration within and across levels
- Allows quick searches by subject, grade level, or standard
- Protects original material while allowing for feedback, corrections, and changes

Supporting Children with ADHD

Attention-Deficit/Hyperactivity Disorder (ADHD or ADD) sprang into public consciousness a few years ago and has gotten so much media play that some now dismiss its seriousness, thinking it's a fad diagnosis or an excuse for bad behavior. Recent medical research, however, has confirmed the validity of the diagnosis and has begun to reveal the disorder's biological, genetic, and neuropsychological underpinnings. Despite growing public awareness and scientific knowledge, children with ADHD do not always get the academic and behavioral help they need to succeed in school.

At a Glance: ADHD and IDEA 1997, offers policymakers an overview of federal requirements as well as information specific to the AEL region. This issue of *Policy Briefs* was excerpted from a monograph, *ADHD and School Law;* both publications can be found on AEL's Web site.

See inside for ordering information.

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Some documents can be downloaded from our Web site (http://www.ael.org). Look for this symbol: Ⓦ

___ **A Guide to Gender Fair Education in Science and Mathematics (1998)**

This publication presents information gathered from the research and programs developed by hundreds of teachers and researchers in the field of education equity. Highlighted activities are examples of programs supported by the U.S. Department of Education and National Science Foundation, as well as states, counties, and cities. It includes an annotated bibliography of programs for girls in grades K-12. $15; 40 pp.

___ **A Teacher's Guide to Project-Based Learning (2000)**

Introduces the ideas and methods that underpin project-based learning. Includes profiles for 13 types of projects, a step-by-step planning guide, an annotated list of references, and more. In press. $16.

At a Glance: ADHD and IDEA 1997 (2000) Ⓦ

This issue of *Policy Briefs* offers an overview of federal requirements as well as information specific to the AEL region. It and the monograph from which it was excerpted, *ADHD and School Law*, are available only on our Web site. Free. http://www.ael.org/rel/policy/adhd2000.htm.

___ **Briefs for Parents** Ⓦ

These sets of six articles are ready to cut and paste into your newsletter, newspaper, or periodical. Each addresses a child development or education topic of concern to parents. They are available free (limit one copy of each set per order). Check the set(s) you wish to receive. Free.

___ Brief articles for a general audience of parents (English only)

___ Spanish language brief articles for parents (with English translations) 1999 edition. http://www.ael.org/eric.parents.htm.

___ **Charter Schools: The Perspective from AEL's Region (1999)** Ⓦ

This issue of *Policy Briefs* discusses the status of charter school legislation in Kentucky, Tennessee, Virginia, and West Virginia; regional concerns for policymakers; and the effect of federal criteria on funding. $2; 8 pp. http://www.ael.org/rel/policy/charter.htm.

___ **Creating Safe Rural Schools (1999)**

In this videotape, educators who have designed and implemented safety programs at the state, district, and school levels suggest ways to create safe rural school settings. $15; 58 minutes.

___ **Curriculum Mapping and Alignment Program (2000)**

A Web-based tool that helps teachers and administrators create and align curriculum to standards, collaborate and share materials, and map semester and/or yearly lesson plans. One-time set-up fee and annual subscription prices are based on school enrollment. For information, call 800-624-9120 and ask for Marian Keyes (ext. 5403) or Becky Burns (ext. 5412) or see the on-line demo at http://www.ael.org/cmap.

___ **Curriculum Snapshots (2000)** Ⓦ

This publication provides glimpses into the classrooms of real teachers to illustrate appropriate and creative uses of technology at all grade levels and within different subject areas. Contributing teachers name useful software, hardware, and supplementary resources. $10; 108 pp. Access to the companion Web site (http://ael.org/snapshot) and downloadable documents is free. The Web site offers a searchable database of lesson ideas and information on how to submit your own.

___ **Dissolving the Boundaries: Planning for Curriculum Integration in Middle and Secondary Schools (1999 revision)**

This publication helps secondary school faculties prepare for curriculum integration through a four-step process. The recent revision integrates technology use into the curriculum units. Book with 78-page facilitator's guide, $31; single or additional copies of book, $16; 83 pp.

___ **Distance-Based and Distributed Learning (2000)** Ⓦ

As more school districts and education institutions explore distance-based learning, they need to know what to think about as they determine if and how to design or acquire courses. This easy-to-use decision tree can help. $2.

Educational Software Use: Results from a 1999 Regional Survey Ⓦ

A look at how teachers in Kentucky, Tennessee, Virginia, and West Virginia use software. Also includes a review of research on technology use and descriptions of software types. Go to http://www.ael.org/rtec/surintro.htm.

___ **Family Connections Parent Notebook**

The *Family Connections* learning guides are now in a notebook for parents and available in three volumes: *Family Connections 1* is for families of preschool children, *Relaciones Familiares 1* is the Spanish-language version, and *Family Connections 2* is for parents with kindergarten children. Each notebook contains a set of 30 four-page guides, plus tips for using them. $14.95 each ($11.95 without 3-ring binder).

___ **Graphing Calculators in Mathematics Grades 7-12** Ⓦ

This resource guide offers lessons covering a wide variety of mathematical concepts and topics. Planned for teachers with no experience with graphing calculators and for those who have used the instruments since inception, these lessons emphasize hands-on problem-solving approaches, with connections to science and the real world. $39; 250 pp. http://www.ael.org/calculators.

___ **In Accord with Nature (1999)**

In Accord with Nature demonstrates how educators and youth leaders can help middle and high school students understand and define their relationship to nature and learn the importance of protecting the environment. Alternative teaching strategies and structured activities connect students with the natural and the built worlds. $19; 192 pp. (ISBN 1-880785-20-X)

___ **K-8 Building Blocks for Algebra (1998)**

Recent research about the human brain supports what teachers have long observed: students learn by fitting new information with what they already know. This publication provides teachers with activities that bring the real world into the classroom and help children make sense of the relationships between numbers. $18; 108 pp.

___ **Local School Improvment Council Kit (1999 revision)**

An information handbook, a facilitator's manual, and a videotape provide information and team-building activities to be used as a workshop for all council members or as information resources by individual members. Specific to West Virginia codes and policies. $25.

___ **Next Steps: Research and Practice to Advance Indian Education (1999)**

Editors asked a dozen indigenous scholars and practitioners to help answer such questions as What is "Indian education" today? and How

will it look in the future? The essays they received help readers explore the issues that face educators who work with indigenous students. $28; 317 pp. (ISBN 1-880785-21-8)

___ Notes from the Field: Evolution of the Primary Program in Six Kentucky Schools. Vol. 6, No. 1 (1998) (W)

In this issue, researchers examine the development of the primary program in six rural Kentucky elementary schools, which they studied for eight years. This report is based on the entirety of the research, but the most detailed description comes from the 1996-97 school year, when researchers narrowed the focus of their work to the class of 2006. $2; 12 pp. plus 8-page supplement. http://www.ael.org/pnp/notes.

___ Notes from the Field: KERA in the Classroom. Vol. 7, No. 1 (2000) (W)

In this issue, researchers present findings and recommendations based on the analysis of school and classroom data gathered during AEL's 10-year study of four school districts.
http://www.ael.org/rel/policy/note2000.htm.

___ Patterns of Promise (2000)

This book describes exemplary uses of technology at 12 schools in the southeastern United States. Large and small, well-to-do and low income, urban and rural—these schools all take creative and innovative approaches to using technology and finding funding. $15; 116 pp.

___ Preventing Antisocial Behavior in Disabled and At-Risk Students (1996) (W)

This issue of *Policy Briefs* focuses on children with ADHD and learning disabilities, presents a model that promotes prosocial behavior, and suggests considerations for practice and policy making. $2; 12 pp.
http://www.ael.org/rel/policy/adhd4.htm.

___ Principal Connections (2000)

This CD-ROM and companion Web site can help school leaders recognize, promote, and evaluate effective technology use. Leaders examine their roles as technology leaders, identify barriers to technology integration, learn strategies to help teachers accept technology, make informed decisions about allocating technology resources, and more. $99 (multiple copy discount available). The Web site (http://www.principalconnections.org) provides supplements and updates to the CD-ROM and links to sites of interest to technology leaders.

___ Reaching Out: Best Practices for Educating Mexican-Origin Children and Youth (1999)

Harriet Romo of the University of Texas at Austin describes successful approaches to improving outcomes for this growing population of U.S. students. $24; 232 pp. (ISBN 1-880785-22-6)

___ Recruiting and Training Volunteer Tutors of Emergent and Beginning Readers (1998)

This manual identifies characteristics of effective tutoring programs; suggests ways to recruit tutors and select the students they'll work with; presents a model for conducting tutor training sessions; and provides activities tutors can use to help readers with comprehension, word study, and writing activities.

___ Trainer's package (includes 90-minute video, 64-page manual, and 15 activity cards). $225.

___ Tutor's package (includes 64-page manual and 15 activity cards). $30.

___ School-Based Programs to Promote Safety and Civility (1998) (W)

Now several rigorous studies of antiviolence programs provide information to help schools and policymakers select methods that may work for them. This issue of *Policy Briefs* focuses on more than 20 primary and secondary level programs, all of which get a thumbs-up from researchers. Complete contact information is provided for each program. $2; 12 pp. http://www.ael.org/rel/policy/schbas.htm.

___ Schools for Disruptive Students: A Questionable Alternative? (1998) (W)

Recent safe-schools legislation and commitments to provide safe learning environments have prompted states to create alternative schools for disruptive students. This issue of *Policy Briefs* reviews research and suggests indicators policymakers can monitor to judge the effectiveness of alternative school legislation. $2; 8 pp.
http://www.ael.org/rel/policy/disrstd.htm.

___ Standards Implementation Indicators: Charting Your Course to High Achievement (2000)

An easy-to-use tool to help school leaders look at their progress toward standards-based instruction. Includes six indicators, a profile chart, and a planning form. $14.95.

___ The ABC's of Parent Involvement (1998)

The ABC's of Parent Involvement in Education: Preparing Your Child for a Lifetime of Success offers information, inspiration, ideas, and expert advice to parents with children of all ages. AEL's Family Connections staff contributed early childhood knowledge. 134 pp. Single copies are $3, and a box of 50 costs $70 east of the Mississippi or $75 west of the Mississippi, shipping included.

___ UnCommon Knowledge: "The Voices of Girls" Documentary (2000)

Girls from one of the poorest rural counties in the United States surprised their families, teachers, and even themselves when they set out on a three-year exploration of the science and mathematics of everyday life. See the powerful impact the Voices of Girls project, funded by the National Science Foundation and operated by AEL, had on everyone involved. Videotape, $15; 57 minutes.

UnCommon Knowledge: Guides for Hands-on Science and Math (2000)

Volume One includes "Eyes on Herbs: The Science of Folk Medicine and Natural Dyes," "Food for Thought: The Science of Nutition," and "The Science of Food Preservation: Crocked Cabbage, Jerked Beef, and Pickled Pigs' Feet." Volume Two contains "Pieces of Mine: The Mathematics of Quilting" and "Crafty Mathematician: Making Art through Mathematics." The guides are free and available only from the ERIC pages of AEL's Web site at http://www.ael.org/eric/voices.

AEL Information (free)

__ Interdisciplinary Teamed Instruction—professional development to help school teams plan integrated courses, units, and lessons

__ QUILT—Questioning and Understanding to Improve Learning and Thinking—a nationally validated, research-based professional development program

Information Search Packages

These are excellent references for policymakers, parents, and the public. Included are reprints of articles from journals, newsletters, and periodicals; ERIC Digests; an ERIC search; and information about AEL-produced materials and other resources.

___ Block Scheduling (1996) $15; 142 pp.
___ Finding Answers to School Violence (1999) $30; 272 pp.
___ Technology in Education (1998) $15; 136 pp.

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Announcements

(continued from page 6)

2,000 schools. AEL is pleased to make Onward to Excellence II available here.

OTE II is listed for adoption by Comprehensive School Reform Demonstration program schools. The two-year implementation follows a 10-step process.

1. Get started. The principal and staff learn about the program. If they decide to use it, a leadership team is selected and a site facilitator (.5 FTE) is identified to assist the school staff.

2. Learn about research. The leadership team studies research on effective schooling practices and introduces the entire staff to the findings.

3. Profile student performance. An external study team, composed of community members, collects and analyzes data about student learning and other variables.

4. Set a schoolwide goal for improvement. The entire school community identifies a schoolwide goal, based on data from the profile, to improve student performance.

5. Map curriculum and instructional practices. The leadership team collects data and summarizes findings for the entire staff, which helps to identify strengths and weaknesses.

6. Study the research and identify practices for improvement.

7. Plan for implementation. Responsibilities, resources, time lines, and professional development should be considered.

8. Implement the plan.

9. Monitor progress.

10. Evaluate progress, celebrate success, and renew improvement efforts.

AEL provides assistance to help schools achieve the program's two primary goals—to focus attention on learning success for all students and to develop the system's capacity for continuous improvement of student learning over the long run.

Get More Info

Onward to Excellence II awareness presentations are free; there is a fee for the complete two-year assistance package and limited federal grant support may be available.

For more information about Onward to Excellence II, contact Beth Sattes by e-mail at sattesb@ael.org or by phone at 800-624-9120. You may also visit the NWREL Web site at http://www.nwrel.org/scpd/ote.

Small, but Powerful—the AEL CD-ROM

It introduces AEL research and services and provides a direct link to our Web page, where you will find much more information.

Important: If your computer does not have a sound card, the digicard will not run properly. Some graphics animations are linked to the audio track.

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How to Use the AEL Digicard

• **Inserting disk into tray-style CD-ROM:** Place disk on the tray with the long sides parallel to the front of the computer. Line up the raised dots on the silver side with the inner circle of the tray. If the tray doesn't have an inner circle, center the disk as closely as possible. Close the tray. If the digicard doesn't start, eject it and start again.

• **Running the digicard for the first time** *(for Windows only):* Most users will need to install Quicktime videoplayer software and adjust display settings the first time they run the digicard. Quicktime is included on the digicard and will install if needed. If your color display needs to be adjusted, you will get a warning stating: "Your monitor's color depth is set to less than 16 bit color." You must correct this for the digicard to play. From the start menu, under settings, go to control panel and choose display. Click on the settings tab. Under color palette, change the setting to high color 16 bit. Some computers may not have this option. If yours doesn't, the digicard will not play. Click OK to continue the instructions on the screen. When the computer is finished, eject and re-insert the digicard.

If you need assistance using the AEL Digicard, please call 800-624-9120 and ask for Nathan Davis.

Grant Opportunities

Federal Programs

NASA: Educational Workshops

Purpose: To model the integration of the national standards in science, mathematics, and technology.

Two-week summer workshops provide educators an opportunity to visit research and applied science facilities, collect and review educational materials, share their teaching experiences and ideas, practice a "hands-on/minds-on" instructional approach, and work cooperatively with their colleagues. About 250 K-12 teachers participate each year.

Grants include travel, housing, and meal expenses; graduate credit is available.
Deadline: February 2001
Applications available at http://www.nsta.org/programs/new.htm and by mail from NASA Educational Workshops, NSTA, 1840 Wilson Blvd., Arlington, VA 22201-3000.

U.S. Department of Education: Magnet Schools Assistance Program

Purpose: To provide grants to eligible local education agencies and consortia of such agencies to support magnet schools that are part of approved desegregation plans.

The level of funding, if any, is contingent on final congressional action. However, applications are being invited to allow enough time to complete the grant process before the end of the federal fiscal year (October 1, 2001) should Congress appropriate funds for this program.

Grants may be for a period of three years, with a range of $200,000 to $3,000,000 per year.
Deadline: December 22, 2000
Additional information available at http://ocfo.ed.gov/fedreg/grantann/q300/073100b.txt.

National Center for Research Resources: Science Education Partnership Award

Purpose: To encourage biomedical and/or behavioral scientists to work as partners with educators on projects to improve student (K-12) and public understanding of health sciences.

Awards will support either development or dissemination of innovative models for enhancing health science education. State and local education agencies are among the eligible applicants. Grants may be for three or five years, up to $300,000 per year.
Deadline: October 1, 2000
Application information available at http://grants.nih.gov/grants/guide/pa-files/PAR-00-036.html and by phone at 301-435-0788.

Office of Postsecondary Education: Fulbright-Hays Group Projects Abroad Program

Purpose: To support overseas projects in training, research, and curriculum development in modern foreign languages and area studies for groups of teachers, students, and faculty engaged in a common endeavor.

Projects may be short-term (4-6 weeks) or longer-term (2-12 months). Awards are expected to range from $30,000 to $75,000, though funding is contingent on final congressional action.

Only projects that focus on specific areas will be funded, and they are listed in the guidelines. Applications for short-term seminars that develop and improve foreign language and area studies at elementary and secondary schools will receive preference.

Eligible applicants include institutions of higher education, state departments of education, nonprofit private educational organizations, and consortia of these entities.
Deadline: October 23, 2000
Applications available at http://www.ed.gov/offices/OPE/HEP/iegps. Information available from Lungching Chiao, U.S. Department of Education. Telephone 202-502-7624, e-mail lungching_chiao@ed.gov

Recycle for Technology

The Educational Technology and Conservation Exchange Program (ETCEP) offers schools a way to help the environment while earning technology products. Collect empty laser and inkjet cartridges, send them in to earn points, then redeem the points to get equipment such as computers, network servers, printers, and more.

Free registration and more information available at http://www.fundingfactory.com/etcep/visitorhome.asp.

Foundations

National Foundation for the Improvement of Education: Leadership Grants

Purpose: To underwrite professional development for public school teachers, support personnel, and higher education faculty and staff, and thereby enable them to provide collegial leadership in efforts to improve teaching and learning.

Grants of $1,000 will be awarded to individuals for professional development activities that meet a demonstrated need of students.

Deadline: October 15, 2000

Application available at http://www.nfie.org/lead0.htm or by mail at NFIE, attn: Leadership Grants, 1201 Sixteenth St. NW, Suite 416, Washington, DC 20036-3207.

Arthur Vining Davis Foundation: Secondary Education Grants

Purpose: To support high school teaching through sustained partnerships between the faculties of colleges and school districts or combined efforts involving reform organizations, colleges/universities, and high schools.

Proposals must generally come from postsecondary institutions or education research institutes. Projects seeking to address the concerns and problems of secondary education on a national level will receive special consideration. Grants will range from $75,000 to $150,000.

Deadline: Open

Application information available on-line at http://jvm.com/davis; by mail at Arthur Vining Davis Foundations, 111 Riverside Avenue, Suite 130, Jacksonville, FL 32202-4921; or by phone at 904-359-0670.

MCI WorldCom Foundation: MarcoPolo Professional Development

Purpose: To help K-12 teachers integrate the Internet into instruction through on-site professional development.

Award includes on-site trainers and copies of training materials.

Deadline: Open

Application available on-line at http://www.wcom.com/marcopolo/training/request.shtml.

Other

Institute of International Education: Fulbright Memorial Fund Teacher Program

Purpose: Sponsored by the government of Japan to provide opportunities for international experience to educators.

Primary and secondary school teachers and administrators are invited to apply to spend three weeks in Japan in either the spring or fall of 2001. Approximately 600 educators will be selected to participate.

Deadline: December 19, 2000

Application available on-line at http://www.iie.org/pgms/fmf or by mail at Institute of International Education, 809 United Nations Plaza, New York, NY 10017-3580.

American Express: Economic Independence Grants

Purpose: To support initiatives that encourage, reinforce, or develop economic self-reliance, such as school-to-career programs, job-related adult education, and programs that teach the fundamentals of business and economics.

Proposals can be directed toward career readiness programs; education, training, and workplace experiences that build career awareness; education on the fundamentals of business and economics, the basics of personal financial management, and related consumer issues; promotion of entrepreneurship and small business development.

Deadline: Open

Guidelines available on-line at http://home3.americanexpress.com/corp/philanthropy/economic.asp or by mail from Terry Savage, Director, Philanthropic Program, American Express Company, World Financial Center, New York, NY 10285-4803.

Fulbright Teacher and Administrator Exchange Program

Want to trade jobs with a counterpart in another country for a year? This program offers that opportunity, and participants remain on the payrolls of their home schools. The program is administered by the Graduate School of the U.S. Department of Agriculture and sponsored by the U.S. Department of State. Information available on-line at http://www.grad.usda.gov/International/ftep.html.

Publications of Interest

A Compilation of Assessment and Evaluation

More than 150 technical reports, 25 newsletters, two videos, numerous assessments, scoring rubrics, guidebooks, and research articles have been gathered on a CD-ROM from the National Center for Research on Evaluation, Standards, and Student Testing (CRESST). The comprehensive results and products from a long-term federal investment in K-12 assessment and evaluation research appear on *9 Years of CRESST Research*, available for $15. To order, contact Kim Hurst by phone at 310-794-9140 or by e-mail at kim@cse.ucal.edu.

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Education Statistics Available

The National Center for Education Statistics (NCES) gathers statistics on many aspects of education and publishes them in print and on-line. Here are a few recent releases; a more complete list and the full text of many reports are available at http://nces.ed.gov/pubsearch/index.asp. To order print copies, phone 877-4ED-Pubs.

- *The Condition of Education, 2000* summarizes the health of education, monitors important developments, and shows trends in major aspects of education. The 65 indicators examine relationships; show changes over time; compare or contrast sub-populations, regions, or countries; or assess characteristics of students from different backgrounds and types of schools. Publication # NCES 2000062.
- *Dropout Rates in the United States: 1998* presents data on high school dropout and completion rates in 1998. It includes time series data for the period 1972 through 1998. Publication # NCES 2000-022a.
- *Vocational Education in the United States: Toward the Year 2000* is the third in a series of reports and attempts to capture the evolving enterprise of vocational education. It describes trends in participation in secondary and postsecondary vocational education, and presents findings about the academic preparation of high school students who participate in vocational education, relevant school reform efforts, and transitions after high school. Publication # NCES 2000-029a.
- *Trends in Educational Equity of Girls and Women* examines the extent to which males and females have access to the same educational opportunities, avail themselves equally of these opportunities, perform at the same level, succeed at the same rate, and obtain the same benefits. Publication # NCES 2000-030a.
- *Nutrition Education in Public Elementary School Classrooms, K-5* presents findings from the survey *Nutrition Education in U.S. Public Schools, Elementary Teacher Survey, K-5*. Publication # NCES 2000-040a.

Support for New Teachers

At a time when many businesses encourage group work to boost productivity, many new teachers remain isolated in their classrooms, unable to take advantage of their peers' knowledge and experiences. A 28-page booklet from the Office of Educational Research and Improvement at the U.S. Department of Education, titled *Survival Guide for New Teachers*, offers strategies for working with mentors, involving parents, and fostering supportive relationships, as well as Internet resources that can help reduce isolation.

The book includes stories and reflections from 53 award-winning first-year teachers. They "talk candidly about their successes and setbacks, with a particular emphasis on the relationships they formed with their colleagues, university professors, and their students' parents."

To order *Survival Guide for New Teachers*, call 877-4ED-Pubs. Publication # ORAD 2000-1001.

Science Education Examined

In 1985, the American Association for the Advancement of Science launched Project 2061, a long-term effort to reform science, mathematics, and technology education. Since then, the project has formed partnerships with scientists, mathematicians, technologists, teachers, and school district administrators to accomplish several pieces of work. Publications resulting from this work are available through the project Web site, in print, or on CD-ROM.

Science for All Americans defines science literacy, outlining what all high school graduates should know and be able to do. *Benchmarks for Science Literacy* outlines the progress that students can be expected to

make toward science literacy by the end of grades 2, 5, 8, and 12. *Resources for Science Literacy: Professional Development* offers a wide array of materials designed to provide educators with a deeper understanding of how to help students achieve science literacy. Other works include *Middle Grades Mathematics Textbooks: A Benchmarks-Based Evaluation On-Line,* which includes the results of the project's analysis of 13 middle school textbooks and reports on each.

For more information, go to http://www.project2061.org. A Spanish-language site is maintained at http://www.project2061.org/espanol.

Multimedia Tutorials

Educators and parents can now take short multimedia lessons on such topics as multiple intelligences, curriculum integration, standards, phonics/whole language, and more. From the Association for Supervision and Curriculum Development (ASCD), these on-line tutorials include definitions, short articles, video and audio files of experts and practitioners, and a listing of resources that provide more information.

Viewing the files requires installation of RealPlayer, a free plug-in available at the site. To find the ASCD Tutorials, go to http://webserver2.ascd.org/tutorials.

Learning about Student Assessment—Boring? Not!

A new publication from the Northwest Regional Educational Laboratory shares 18 short, hands-on professional development activities that provide engaging assessment situations and dilemmas for teachers to work out. Principals and instructional leaders can use *Student Assessment Mini-Lessons for Your Staff* in staff meetings to help teachers develop the knowledge and skills needed to assess students well.

Most of the activities fit into a one-

(continued on page 12)

Help with IDEA and IEPs

A Guide to the Individualized Education Program **is intended to assist educators, parents, and state and local educational agencies in implementing the requirements of Part B of the Individuals with Disabilities Education Act (IDEA) regarding Individualized Education Programs (IEPs) for children with disabilities, including preschool-aged children. Go to http://www.ed.gov/offices/OSERS/OSEP/IEP_Guide/**

The Story of CSR Research

(continued from page 3)

less of whether the reform is associated with the federal CSRD program.

U.S. Department of Education. The department's primary role in research is to "tell the story"—communicate what works and why to national, state, and local practitioners and policymakers.

In terms of resources, the department needs to stress that states, districts, and schools can merge federal education funding streams for the purposes of planning and implementing comprehensive school reform. Local tradition can be a barrier in this effort, making community involvement even more important.

While school staff members frequently lack the time and expertise to conduct needs assessments based upon data, the department can help by bolstering state financial resources and providing more on-site help through its cadre of technical assistance providers.

Regional Educational Laboratories. Educators need readily available syntheses of existing research on comprehensive school reform. Of particular interest are syntheses that would help schools integrate comprehensive reform with other efforts and ensure that resources are being used effectively.

Suggested topics for future research include identifying common characteristics associated with long-term improvements (seven to ten years), examining more closely the factors that influence classroom change (particularly the relationship between teacher and student), and thinking about how to encourage district- and state-level entities to support reform and allow flexibility in achieving it.

The symposium was cosponsored by AEL, the National Clearinghouse for Comprehensive School Reform, and COSMOS Corporation and The McKenzie Group, in partnership with the Office of Educational Research and Improvement and the Planning and Evaluation Services of the U.S. Department of Education. A complete transcript and profiles of pertinent research will be available from AEL later this fall. Watch our Web site (http://www.ael.org/rel/csr) for more information.

Publications of Interest

(continued from page 11)

hour time period, although they can complement other workshops, collaborative learning groups, and self-study as part of a comprehensive professional development plan. Tips for navigating the minilessons and tailoring them for teachers with varying degrees of assessment experience are provided.

To order, send $19 to NWREL Document Reproduction Service. By mail: 101 S.W. Main Street, Suite 500, Portland, OR 97204-3297; by e-mail: products@nwrel.org.

Promoting Positive Behavior: Ideas That Work

A unique collaboration between school administrators and researchers, funded by the U.S. Department of Education, offers a print resource titled *Prevention Strategies That Work: What Administrators Can Do To Promote Positive Student Behavior.* This tool is useful for school administrators, teacher educators, parents, and social service personnel.

A companion Web page provides creative suggestions for how to include children with behavioral or emotional problems in various educational settings. It describes prevention practices that K-8 public school administrators have found to be effective in accelerating school performance, increasing readiness for learning, and reducing problem behaviors.

To order, go to the Center for Effective Collaboration and Practice Web site at http://cecp.air.org/preventionstrategies or send e-mail to crsnyder@zoo.uvm.edu. The first copy is shipped free; there is a $3.50 shipping and handling charge for orders of two to eight copies. Contact Cyndi Snyder (at e-mail above) for shipping costs on additional copies.

Strategies for Implementing Reform

Voices from the Field: Success in School Reform offers strategies and tips on implementing reform. The guidance comes from work done by the Southwest Educational Development Laboratory (SEDL), where researcher Shirley Hord has identified six strategies for school improvement. Two audiotapes present practical advice and down-to-earth solutions for implementing the steps of reform and improvement. A guidebook offers additional tips and reflection questions that school reformers can use as they work together.

Running time of the tapes is 40 minutes, the guidebook is 22 pages, and the price is $25. To order, go to http://www.sedl.org/pubs or phone 800-476-6861.

Building Better School Leaders

In 1994, the Council of Chief State School Officers started a program called the Interstate School Leaders Licensure Consortium (ISLLC). The Consortium has been working to "raise the bar for the practice of school leadership" and has led the development of standards for school leaders (1996), studied standards based professional development for school leaders (2000), and designed a professional development process for school leaders (2000).

Standards for School Leaders sets out six standards and identifies knowledge, dispositions, and performances connected to each.

Standards Based Professional Development for School Leaders and *Collaborative Professional Development Process for School Leaders,* developed in partnership with the National Policy Board for Educational Administration, set out research-based characteristics of professional development, provide examples of effective programs, and guide users through a collaborative and reflective learning process.

The publications are available in one notebook for $35 from the Council of Chief State School Officers, One Massachusetts Avenue, NW, Suite 700, Washington, DC 20001-1431; phone 202-336-7016. To order on-line, go to http://publications.ccsso.org.

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AEL is a private, nonprofit corporation. AEL serves as the regional educational laboratory for Kentucky, Tennessee, Virginia, and West Virginia. For these same four states, it operates both a Regional Technology in Education Consortium and the Eisenhower Regional Consortium for Mathematics and Science Education. In addition, it serves as the Region IV Comprehensive Center and operates the ERIC Clearinghouse on Rural Education and Small Schools. AEL's primary source of funding is the Office of Educational Research and Improvement (OERI), U.S. Department of Education. This publication is produced with funds from OERI contract number RJ96006001. The contents herein do not necessarily reflect AEL or OERI policies or views.

OERI

AEL is a catalyst for schools and communities to build lifelong learning systems that harness resources, research, and practical wisdom

Vol. 19, No. 4

THE LINK

A PUBLICATION FOR EDUCATION PRACTITIONERS

Serving educators in Kentucky, Tennessee, Virginia, and West Virginia since 1966

The New *hyper*Link

If you've been a *Link* reader for a while—more than 10 years or so—you might remember that it was once a little gray and wine booklet. And if you've been on AEL's mailing list for a *really* long time—back to the 70s—you might even remember *The Appalachian Educator* or the *Rx Bulletin*.

Those publications were laid to rest in 1981, but some of their parts and pieces lived on in their replacement—*The Link*. We chose that name because linking the two worlds of education research and practice has always been, and continues to be, at the heart of AEL's work. Well, *The Link* is about to transform itself again, and now the name will come to mean hyperlink.

Recently, AEL became the first education institution in the world to use the new Digimarc MediaBridge technology, which uses digital watermarks to instantly deliver a specified Web site. AEL's *Patterns of Promise* was the first Internet-enabled AEL publication.

Starting with this issue, *The Link* will contain images embedded with a Digimarc—see the star on each page. When you hold the star up to a digital camera that is connected to your desktop computer, the Digimarc MediaBridge software reads the watermark, activates your Web browser, and delivers AEL's Web site to your screen. From there, you will be able to launch related Web sites and access a wealth of information for each topic—without typing long URLs. You can recognize any Internet-enabled page by the symbol you see at the right.

Please join us in exploring the benefits of this evolutionary technology. Go to http://www.LookForTheD.com to download and install the free Digimarc MediaBridge software. This technology is new and glitches may occur, but it promises to expand the way we read and use printed materials.

AEL extends sincere appreciation to Digimarc Embedding Institute for allowing us to participate in this exciting new innovation. Please let us know about your experiences with the new *hyper*Link.

AEL

Telephone:
304-347-0400
800-624-9120
E-mail:
link@ael.org

This symbol signals the use of new Digimarc MediaBridge technology. See the story at left to learn how it can enhance your use of this publication.

IN THIS ISSUE

Research Notes
Information Overload: Preschool Education; High Poverty and Low Achievement: Inequities in Teacher Distribution; Central Web Site for Research Reports; Teens and School; Early Reading Programs; The Contexts of Comprehension. p. 2

Announcements and Information
National Teacher Clearinghouse; Rural Schools Web Site; Learn Media-Rich Teaching Methods; Professional Development Awards Deadline; Online High School Ready to Go National. p. 4

Publications of Interest
Classroom Strategies that Work; Technology and Young Children; Data for Better Decisions; Assessment that Fits the Student; Testing and English Language Learners; Video on Assessment; The Gateway℠; Reaching All Families; New Science Press; Aligning Resources to Support Student Achievement. p. 6

New Resources from AEL
Educational Software Use. p. 6
Elementary Reform in Kentucky; Better Buildings for Rural Schools; Small High Schools Work. Insert/Order form

Grant Opportunities
Federal, Foundation, and More. p. 8

The Link is free to educators in the AEL region. Readers are encouraged to reproduce its contents, giving proper credit. On request, AEL will provide camera-ready copy on white paper. Current and many back issues are available in PDF at http://www.ael.org.

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115

Research Notes

Information Overload: It's for Real

A team of researchers at U.C. Berkeley's School of Information Management and Systems has published a study that attempts to measure how much information is produced annually worldwide. The analysts examined a variety of media including print, film, optical, broadcast, and Internet. The abstract begins: "The world produces between 1 and 2 exabytes of unique information per year, which is roughly 250 megabytes for each man, woman, and child on earth. An exabyte is a billion gigabytes, or 10^{18} bytes."

How Much Information? by P. Lyman, H. R. Varian, J. Dunn, A. Strygin, & K. Swearingen, is available free at http://www.sims.berkeley.edu/how-much-info.

Preschool Education

A forthcoming publication from the National Research Council's Committee on Early Childhood Pedagogy reviews and synthesizes the latest research on how young children learn and the impact of early learning. The editors of *Eager to Learn: Educating Our Preschoolers* explore the question of what it will take to provide better early education and care for our children between the ages of two and five.

Key discoveries about early learning are presented in language accessible to parents and educators. Included are findings about the interplay of biology and environment; learning variations among individuals from different social and economic groups; and the importance of health, safety, nutrition, and interpersonal warmth to early learning.

Eager to Learn reviews the elements of high-quality preschool programs and recommends effective teaching practices. While the committee does not endorse any particular curriculum, it suggests several principles of learning that should be incorporated into any curriculum:

- Teaching and learning will be most effective if they engage and build on children's existing understandings.
- Key concepts involved in each domain of preschool learning (e.g., representational systems in early literacy, the difference between counting numbers and fractions, causation in the physical world) must go hand-in-hand with information and skill acquisition.
- Metacognitive skill development allows children to learn more deliberately. Curricula that encourage children to reflect, predict, question, and hypothesize (*How many will there be after two numbers are added? What happens next in the story? Will it sink or float?*) set them on course for effective, engaged learning.

Eager to Learn: Educating Our Preschoolers is edited by Barbara Bowman, M. Suzanne Donovan, and M. Susan Burns. The executive summary and ordering information are available on-line at http://www.nap.edu/books/0309068363/html.

High Poverty and Low Achievement

A recent study shows that high-poverty schools can reach high levels of academic achievement, although the link between poverty and low performance is still strong. Susan Perkins Weston, executive director of the Kentucky Association of School Councils, analyzed the results of Kentucky's 1999 Core Content Tests for all K-12 grades by looking at three areas: poverty level, top 20 scores, and bottom 20 scores.

Weston found that, overall, scores in all subjects increased as poverty levels decreased. For example, on the fifth-grade content indexes, differences between schools with 0 to 20% of students qualifying for free or reduced-price lunch and those with 81 to 100% qualifying ranged from 19 points on the practical/vocational subtest to 37 points on mathematics. Clustering results by school districts revealed that achievement strengths or weaknesses often go beyond individual schools to include whole districts, a finding that may indicate the influence of district policies on student achievement.

A disproportionate number of Kentucky's minority students attend low-achieving schools. Statewide, 10.5% of elementary students are African American, but they make up 22% of the student body at schools with bottom 20 results and only 7.2% of students at schools with top 20 results. Middle and high school proportions are similar.

The *Performance and Poverty* report concludes that (1) generally, poverty is a reliable indicator of low achievement, but (2) schools can beat the odds. The top

elementary science score in 1999 was achieved by a school with 94% of its students eligible for free or reduced-price lunch.

For a copy of *Performance and Poverty*, contact the Prichard Committee at 800-928-2111.

Inequities in Teacher Distribution

One way that high-poverty schools can break the link between poverty and low achievement is by putting high-quality teachers in every classroom. Unfortunately, according to a recent report from the Education Trust, this happens too infrequently. Even within a school, the "better" students generally get the fully certified, most experienced teachers, while the students in lower track classes may be taught by uncensed, brand new, or out-of-field teachers.

Why do schools often assign the weakest teachers to the children who need the most academic help? There's no single explanation, rather several policies and forces that contribute to the problem.

- differences among districts in resources to pay teachers
- differences within districts as a result of seniority transfer provisions
- differences within schools, when educators disagree about who should teach which students
- too few highly qualified teachers who want to teach in high-poverty schools
- a culture within teaching that ties teacher status to perceptions of student ability

The report offers four recommendations for actions that communities and states can take immediately to help remedy imbalances in teacher quality.

1. **Fix the bathrooms and the teachers' room (and, while you're at it, the restrooms for students).** The conditions of the schools send powerful messages about how we value the teachers and students who work in them.
2. **Get your data together and get it out.** Share honest, clear data about teacher quality and the impact it has on student achievement.
3. **Convene a broad-based group to brainstorm and comb the country for possible solutions.** Ask the best teachers for their ideas and leadership.
4. **Get going.**

Honor in the Boxcar: Equalizing Teacher Quality is available free on-line at http://www.edtrust.org or by mail from The Education Trust, 1725 K St., NW, Washington, DC 20006. Include $2.50 for shipping and handling.

Central Web Site for Research Reports

Research from the 12 National Research and Development Centers of the Office of Educational Research and Improvement can now be accessed through one site. Specific topics addressed by the Centers include early childhood development and learning, cultural and linguistic diversity, education of at-risk students, gifted education, and education policy. Summaries of two recent studies appear below, and links to many more are available at http://research.cse.ucla.edu.

From the Center for the Improvement of Early Reading Achievement (CIERA)

Print copies of the reports are available for $6.50 each from CIERA/University of Michigan, 610 E. University Ave., 1600 SEB, Ann Arbor, MI 48109-1259. They are also available for free download at http://www.ciera.org under the "Newest Findings" bar on the home page.

Early Reading Programs in High-Poverty Schools: Emerald Elementary Beats the Odds by Charles Fisher and Martha A. Adler, CIERA Report No. 3-009

From 1996 through 1998, Emerald Elementary School's students performed well above the district average and above or near

(continued on page 7)

Teens and School

Results of the 16th annual Metropolitan Life education survey were released in late September. Harris Interactive gathered information between March and May from students (3,961 in grades 7-12), teachers (1,010 in grades 7-12), and parents (2,017 with children in grades K-12).

The American Teacher 2000: Are We Preparing Students for the 21st Century? reveals challenges our school communities need to meet. Examples of the findings are presented on pages 5, 7, and 11; get the complete report from the Metropolitan Life Insurance Company at One Madison Avenue, New York, NY 10010 or visit the Met's Web site at http://www.metlife.com/Companyinfo/Community/Found/Docs/2000pdf.html.

Announcements and Information

National Teacher Clearinghouse

The new National Teacher Recruitment Clearinghouse, funded by the U.S. Department of Education, is a comprehensive resource for teachers and districts and offers valuable tools for individuals considering careers in teaching. It provides links to more than 150 educational institution Web sites that provide resources on teacher recruitment, certification, salaries, and other issues.

The Clearinghouse allows prospective teachers to find out about jobs and seek answers to questions about a teaching career.

School districts and teachers can use the Clearinghouse to

- access on-line job banks and job listings
- find out how to prepare to become a teacher
- understand in which geographic and subject areas teachers are most needed
- find out about new incentives districts are offering to new teachers
- learn about proven strategies for finding and keeping teachers
- expand a district's reach to a national audience of prospective teachers

"At such a critical time, when so many districts face a shortfall in certified teachers, this free service may have a tremendous impact on the way school districts find quality teachers. Its easy-to-use format will make it all the more valuable," said U.S. Secretary of Education Richard W. Riley.

School districts and states can add their information to the Clearinghouse by completing a short, five-minute questionnaire on-line. By adding their job banks or listings, districts and states can increase traffic to their own Web sites and gain access to a national pool of teachers. Qualified teachers looking for jobs can use the Clearinghouse to find places to post their resumés.

Visit the Clearinghouse Web site at http://www.recruitingteachers.org.

Equity Conference 2001

The Eisenhower Regional Consortium for Mathematics and Science Education and the Region IV Comprehensive Center at AEL will collaborate with the Virginia Space Grant Consortium to hold their annual equity conference March 21-23, 2001.

Access for All: Math, Science, and Technology will provide information and resources that address access for all students. Participants will have an opportunity to create networks and partnerships to promote access and to learn math, science, and technology strategies that will ensure access.

Early registration (through February 16) is $100. The conference will be held at the Wyndham Roanoke Airport in Roanoke, Virginia. For more information or to register, contact Terry Foster or Angie Anderson at 800-624-9120 or visit AEL's Web site at http://www.ael.org/eisen/access01.htm.

Rural Schools Web Site

The U.S. Department of Education recently debuted a Web site for and about rural schools. *Navigating Resources for Rural Schools*, at http://nces.ed.gov/surveys/ruraled, links to several providers of information and services, among them AEL's Rural Center and the ERIC Clearinghouse on Rural Education and Small Schools at AEL. The new site also links to relevant Department programs, research and promising practices related to rural education, and the Distance Learning Resource Network.

Developed by the National Center for Education Statistics, the site provides data and information on current and changing conditions in education in rural America. Examples include data about

- enrollments
- National Assessment of Educational

Progress scores

- coursetaking, dropouts, and transition to college
- support for learning, including parents' satisfaction and involvement, community support, and financial support

Learn Media-Rich Teaching Methods

The 11th annual National Teacher Training Institute (NTTI) is a series of seminars at more than 50 sites across the country. This partnership of 30 American public television stations, spearheaded by Thirteen/WNET New York, will help more than 135,000 teachers learn to use free Instructional Television videos, the Internet, and hands-on activities to teach lessons, especially math and science. NTTI recruits and trains a base of master teachers who create, write, and model for their peers.

After training, on-line support continues with standards-based lesson plans; classroom activities that use technology, Internet, and video classroom strategies; on-line resources; and more.

For teachers who can't attend a seminar, NTTI offers Internet in Action: Web in the Classroom, on-line instruction in basic technological applications and skills. Course participants use dynamic on-line tutorials and resources that provide practical frameworks for integration. They identify and design Web-based activities to use in their classrooms, and keep reflective journals.

The winter session begins on January 5, the spring session on March 2. There are several options of study for Internet in Action. Through WNET, the charge is $100 for the self-paced, self-study option (for 2 CEUs or noncredit); $200 for the instructor-led option (for 4 CEUs or noncredit); and $400 for one graduate credit. Rutgers University and other partner institutions have their own cost structures.

For a schedule of seminars and more information about the on-line course, visit NTTI's Web site at http://www.thirteen.org/wnetschool/ntti.

Professional Development Awards Deadline

Application packages for the National Awards Program for Model Professional Development are now available, and the deadline for submissions is January 16, 2001. You can download an application from the Web (http://www.ed.gov/inits/TeachersWeb) or contact Jane Hange at AEL. Send e-mail to hangej@ael.org or use the phone numbers and mailing address printed on the covers of this issue. Jane will be happy to respond to questions about the program.

For more information about professional development planning, see the story titled "Enlist Colleagues in Reflection and Planning" in the Summer 2000 *Link* at http://www.ael.org/link/v19n2/index.htm.

On-line High School Ready to Go National

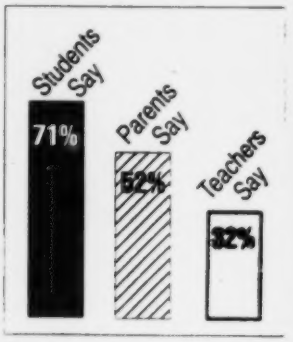
The Florida High School, a program featured in AEL's *Patterns of Promise*, is preparing to take its virtual classes to a national audience. The Web-based public school, recognized by AEL for effectively employing technology as part of systemic change, began in 1998 as a collaboration between two Florida county school districts. At the time, it offered 11 on-line courses.

The school's motto—"any time, any place, any path, any pace"—expresses its commitment to making education accessible. It has already expanded to include all Florida high school students and will welcome other students in the coming year.

For more information, visit The Florida High School Web site at http://www.fhs.net or read *Patterns of Promise* (for ordering information, see insert/order form or visit AEL's on-line catalog at http://www.ael.org.

Students Planning to Attend Four-year Colleges

When asked to describe their plans for the future, students, teachers, and parents had very different expectations for today's teens.



From the *Metropolitan Life Survey of the American Teacher 2000*. See Teens and School, page 3.

New Resources from AEL

Exploring Technology

Educational Software Use: The 2000 Report

This report presents the findings of a SEIR◆TEC at AEL follow-up survey and puts a slightly different spin on an old adage: "You can lead a horse to water, but if you can get it to float on its back, you've really done something."

The 1999 survey demonstrated that merely leading teachers *to* the technology is not enough. Barriers exist between technology access and technology use. This latest report focuses on barriers related specifically to software in an effort to explain the high number of respondents indicating *never* using software in their classrooms.

The 2000 follow-up survey involved respondents from the previous survey. They represent a random sample of K-12 public school teachers in Kentucky, Tennessee, Virginia, and West Virginia.

The follow-up survey intended to ascertain current levels of training in the region and whether a lack of training can be a barrier to software use. Questions were intended to provide insight into beliefs about the importance of software use in teaching and learning, barriers to software use in the classroom, software selection practices, beliefs regarding the alignment of software and instructional goals, professional development experiences related to technology integration, and patterns of software use.

The results of this study offer encouragement about the progress teachers in the region have made regarding educational software use. It is reassuring that 81.6% of educators surveyed view software as an important element of their teaching and their students' learning. A surprising finding is that 53% of the respondents indicated that the available software aligns well or very well with instructional goals.

(continued on order form/insert)

Publications of Interest

Classroom Strategies that Work

What Works in Classroom Instruction features instructional strategies that research shows have the greatest likelihood of improving student learning. The 178-page publication is designed to help K-12 teachers and administrators easily select strategies and integrate them with existing programs or practices. The guidance offered in this manual builds on years of practical experience and efforts to synthesize the research on teaching by Mid-continent Research for Education and Learning (McREL). This publication is designed for K-12 classroom teachers, building-level administrators, and central office administrators. It is offered as a tool to enhance students' achievement in any content area. It was written by Robert Marzano, Barbara Gaddy, and Ceri Dean. Get it free at http://www.mcrel.org/products/learning/whatworks.pdf or order a print copy from McREL, 2550 S. Parker Road, Suite 500, Aurora, CO 80014-1678; send e-mail to info@mcrel.org.

Technology and Young Children

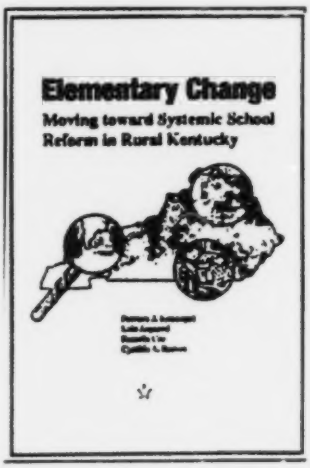
Learn what technology can—and cannot—do in the education of young children. *Early Connections*, a Web site developed by Northwest Regional Educational Laboratory and its Northwest Educational Technology Consortium, provides research-based information and resources for those who work with children ages 8 and younger. It pulls together a range of information about child development; use of technology; and tips for teachers, parents, caregivers, and others. Visit the site at http://www.netc.org/earlyconnections.

(continued on page 10)

New Resources from AEL

Elementary Reform in Kentucky

Elementary Change: Moving Toward Systemic School Reform in Rural Kentucky



This book captures the results of AEL's 10-year, qualitative study of systemic school reform in four rural Kentucky school districts. The study began in the fall of 1990 just after the Kentucky Education Reform Act (KERA) took effect. The research findings include

- student achievement improved under KERA, with the greatest gains in the schools that closely monitored the progress of each student
- most of the schools included in the study were more focused on raising average test scores at the school level than on improving the learning of individual students
- curricular and instructional changes occurred in the areas of writing, curriculum alignment, subject matter integration, and use of instructional technology
- teachers had difficulty teaching to the KERA goals that involved higher order thinking skills
- key policy decisions devolved to the school level, but were not necessarily made by KERA-mandated school-based decisionmaking councils
- teachers were unsure how to implement the KERA-mandated nongraded primary program in ways that helped prepare students for the state assessment
- key issues in the success of systemic reform are (1) finding and keeping good principals, and (2) finding time for teachers to implement the required changes

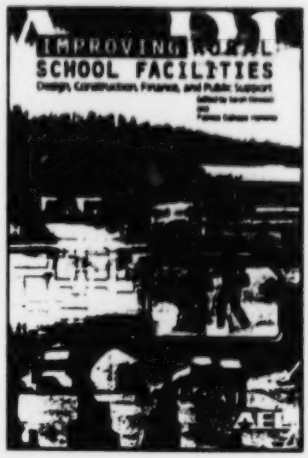
Better Buildings for Rural Schools

Improving Rural School Facilities: Design, Construction, Finance, and Public Support

While the condition of rural school facilities varies across the country, most rural school districts face similar issues as they consider new facility construction, renovations, or additions:

- how to gain public support for funding
- how to make the best use of local resources
- how to design buildings that are useful to the community in a variety of capacities
- how to design renovations or new buildings that optimize instruction and use of technology

This book provides an overview of these issues and offers inspiring case studies of communities that have worked against the odds and succeeded.

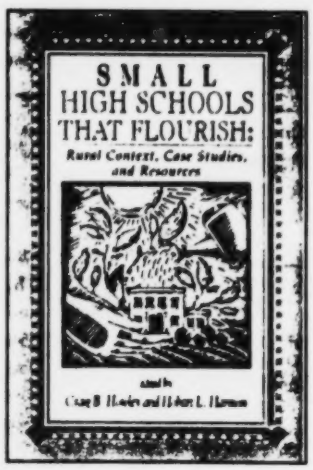


Chapter topics include

- Trends and Issues Affecting Rural School Facilities
- Financing Facilities in Rural School Districts: Variations among the States and the Case of Arkansas
- Preserving Heritage While Restoring and Improving Facilities: A Rural Community's Experience
- Creating Technology Infrastructures in a Rural School District: A Partnership Approach
- Gaining Rural Community Support for a Bond Issue: A Superintendent's Experience
- Maintaining Respect for the Past and Flexibility for the Future: Additions and Renovations as an Integrated Sequence
- Managing the Rural School Facility Construction Process

Small High Schools Work

Small High Schools that Flourish: Rural Context, Case Studies, and Resources



Professional opinion about small schools is changing. It is now widely recognized that, compared with larger schools, small schools are more productive and effective. Students make more rapid progress toward graduation, they are more satisfied, fewer drop out, and they behave better. All of these benefits are especially true for disadvantaged students.

Yet, in many rural areas, public officials and professional educators continue to believe small schools are inefficient and ineffective. Rural communities have seen this way of thinking result in closed schools, angry residents, and long bus rides for many students.

This book discusses the general status of small rural high schools in the United States and why we should care about them. It then takes a closer look at four particular schools—all located in communities of very modest means—that were nevertheless flourishing institutions. Discover the vision, worldview, and local initiative evident in these schools and their rural communities.

Small High Schools that Flourish provides guidance to administrators and policymakers who would like to keep their small high schools but must grapple with problems of funding, outmigration, personnel shortages, and curriculum standards and accountability. A detailed resource section provides links to helpful organizations and publications to aid educators and community members in maintaining and improving their small high schools.

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See inside for ordering information.

Resources Available from AEL

Some documents can be downloaded from our Web site (http://www.ael.org). Look for this symbol: Ⓦ

___ A Guide to Gender Fair Education in Science and Mathematics (1998) Ⓦ

This publication presents information gathered from the work of hundreds of teachers and researchers in the field of education equity. Highlighted activities are examples of programs supported by the U.S. Department of Education and National Science Foundation, as well as states, counties, and cities. It includes an annotated bibliography of programs for girls in grades K-12. $15; 40 pp.

___ A Teacher's Guide to Project-Based Learning (2000)

Introduces the ideas and methods that underpin project-based learning. Includes profiles for 13 types of projects, a step-by-step planning guide, an annotated list of references, and more. $16; 98pp.

At a Glance: ADHD and IDEA 1997 (2000) Ⓦ

This issue of *Policy Briefs* offers an overview of federal requirements as well as information specific to the AEL region. It and the monograph from which it was excerpted, *ADHD and School Law*, are available only on our Web site. Free. http://www.ael.org/rel/policy/adhd2000.htm.

___ Briefs for Parents Ⓦ

These sets of six articles are ready to cut and paste into your newsletter, newspaper, or periodical. Each addresses a child development or education topic of concern to parents. They are available free (limit one copy of each set per order). Check the set(s) you wish to receive.

___ Brief articles for a general audience of parents (English only)

___ Spanish language brief articles for parents (with English translations) 1999 edition. http://www.ael.org/eric.parents.htm.

___ Charter Schools: The Perspective from AEL's Region (1999) Ⓦ

This issue of *Policy Briefs* discusses the status of charter school legislation in Kentucky, Tennessee, Virginia, and West Virginia; regional concerns for policymakers; and effects of federal criteria on funding. $2; 8 pp. http://www.ael.org/rel/policy/charter.htm.

___ Creating Safe Rural Schools (1999)

In this videotape, educators who have designed and implemented safety programs at the state, district, and school levels suggest ways to create safe rural school settings. $15; 58 minutes.

Curriculum Mapping and Design Tool (2000)

A Web-based tool that helps teachers and administrators create and align curriculum to standards, collaborate and share materials, and map semester and/or yearly lesson plans. One-time set-up fee and annual subscription prices are based on school enrollment—call 800-624-9120 for information or to arrange an on-line demo.

___ Curriculum Snapshots (2000) Ⓦ

This publication provides glimpses into the classrooms of real teachers to illustrate appropriate and creative uses of technology at all grade levels and within different subject areas. Contributing teachers name useful software, hardware, and supplementary resources. $10; 108 pp. Access to the companion Web site (http://ael.org/snapshot) and downloadable documents is free. The Web site offers a searchable database of lesson ideas and information on how to submit your own.

___ Dissolving the Boundaries: Planning for Curriculum Integration in Middle and Secondary Schools (1999 revision)

This publication helps secondary school faculties prepare for curriculum integration through a four-step process. The recent revision integrates technology use into the curriculum units. Book with 78-page facilitator's guide. $31; single or additional copies of book, $16; 83 pp.

___ Distance-Based and Distributed Learning (2000)

As more school districts and education institutions explore distance-based learning, they need to know what to think about as they design or acquire courses. This easy-to-use decision tree can help. $2.

Educational Software Use: Results from a 1999 Regional Survey Ⓦ

A look at how teachers in Kentucky, Tennessee, Virginia, and West Virginia use software. Also includes a review of research on technology use and descriptions of software types. Go to http://www.ael.org/rtec/surintro.htm.

Educational Software Use: The 2000 Report (2000) Ⓦ

This follow-up survey of teachers in the region looked at technology training, beliefs about the importance of software use, barriers to software use in the classroom, software selection practices, and more. Go to http://www.ael.org/rtec/survey.

___ Elementary Change: Moving Toward Systemic School Reform in Rural Kentucky (2000)

This book captures the results of AEL's 10-year, qualitative study of systemic school reform in four rural Kentucky school districts. It presents findings and recommendations to help educators and policymakers keep KERA on track. $20; 244pp.

___ Family Connections Parent Notebook

The *Family Connections* learning guides are now in a notebook for parents and available in three volumes: *Family Connections 1* is for families of preschool children. *Relaciones Familiares 1* is the Spanish-language version, and *Family Connections 2* is for parents with kindergarten children. Each notebook contains a set of 30 four-page guides, plus tips for using them. $14.95 each ($11.95 without 3-ring binder).

___ Graphing Calculators in Mathematics Grades 7-12 Ⓦ

This resource guide offers lessons covering a wide variety of mathematical concepts and topics. Planned for teachers with no experience with graphing calculators and for those who have used the instruments since inception, these lessons emphasize hands-on problem-solving approaches, with connections to science and the real world. $39; 250 pp. http://www.ael.org/calculators.

___ Improving Rural School Facilities: Design, Construction, Finance, and Public Suport (2000)

While the condition of rural school facilities varies across the country, most rural school districts face similar issues. In this book, editors Sarah Dewees and Patricia Cahape Hammer present discussions of these issues from several perspectives. $18; 132 pp. (ISBN 1-891677-05-5)

___ In Accord with Nature (1999)

This book demonstrates how educators and youth leaders can help middle and high school students understand and define their relationship to nature and learn the importance of protecting the environment. Alternative teaching strategies and structured activities connect students with the natural and the built worlds. $19; 192 pp. (ISBN 1-880785-20-X)

___ K-8 Building Blocks for Algebra (1998)

Recent research about the human brain supports what teachers have long observed: students learn by fitting new information with what they already know. This publication provides teachers with activities that

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bring the real world into the classroom and help children make sense of the relationships between numbers. $18; 108 pp.

___ Local School Improvment Council Kit (1999 revision)

An information handbook, a facilitator's manual, and a videotape provide information and team-building activities to be used as a workshop for all council members or as information resources by individual members. Specific to West Virginia codes and policies. $25.

___ Next Steps: Research and Practice to Advance Indian Education (1999)

Editors asked a dozen indigenous scholars and practitioners to help answer such questions as What is "Indian education" today? and How will it look in the future? The essays they received help readers explore the issues that face educators who work with indigenous students. $28; 317 pp. (ISBN 1-880785-21-8)

___ Notes from the Field: Evolution of the Primary Program in Six Kentucky Schools. Vol. 6, No. 1 (1998) (W)

In this issue, researchers examine the development of the primary program in six rural Kentucky elementary schools. Based on eight years of research, the most detailed description comes from 1996-97, when researchers narrowed the focus of their work to the class of 2006. $2; 12 pp. plus 8-page supplement. http://www.ael.org/pnp/notes.

Notes from the Field: KERA in the Classroom. Vol. 7, No. 1 (2000) (W)

In this issue, researchers present findings and recommendations based on analysis of data gathered during AEL's 10-year study of four school districts. http://www.ael.org/rel/policy/note2000.htm.

___ Patterns of Promise (2000)

This book describes exemplary uses of technology at 12 schools in the southeastern United States. Large and small, well-to-do and low income, urban and rural—these schools all take creative and innovative approaches to using technology and finding funding. $15; 116 pp.

___ Preventing Antisocial Behavior in Disabled and At-Risk Students (1998) (W)

This issue of *Policy Briefs* focuses on children with ADHD and learning disabilities, presents a model that promotes prosocial behavior, and suggests considerations for practice and policy making. $2; 12 pp. http://www.ael.org/rel/policy/adhd4.htm.

___ Principal Connections (2000)

This CD-ROM can help school leaders examine their roles as technology leaders, identify barriers to technology integration, learn strategies to help teachers accept technology, and more. $99 (ask about multiple copy discount). The companion Web site provides supplements and updates to the CD-ROM and links to sites of interest to technology leaders (http://www.principalconnections.org).

___ Reaching Out: Best Practices for Educating Mexican-Origin Children and Youth (1999)

Harriet Romo of the University of Texas at Austin describes successful approaches to improving outcomes for this growing population of U.S. students. $24; 232 pp. (ISBN 1-880785-22-6)

___ Recruiting and Training Volunteer Tutors of Emergent and Beginning Readers (1998)

This manual identifies characteristics of effective tutoring programs; suggests ways to recruit tutors and select the students they'll work with; presents a model for conducting tutor training sessions; and provides activities tutors can use to help readers with comprehension, word study, and writing activities.

___ Trainer's package (90-minute video, 64-page manual, and 15 activity cards). $225.

___ Tutor's package (64-page manual and 15 activity cards). $30.

___ School-Based Programs to Promote Safety and Civility (1998) (W)

This issue of *Policy Briefs* focuses on more than 20 primary and secondary level antiviolence programs, all of which get a thumbs-up from researchers. Complete contact information is provided for each program. $2; 12 pp. http://www.ael.org/rel/policy/schbas.htm.

___ Schools for Disruptive Students: A Questionable Alternative? (1998) (W)

Recent legislation and commitments to provide safe learning environments have prompted states to create alternative schools for disruptive students. This issue of *Policy Briefs* reviews research and suggests indicators for judging the effectiveness of alternative school legislation. $2; 8 pp. http://www.ael.org/rel/policy/disrstd.htm.

___ Small High Schools that Flourish: Rural Context, Case Studies, and Resources (2000)

This book discusses small rural high schools in the United States and why we should care about them. It then takes a closer look at four particular schools located in communities of very modest means. Edited by Craig B. Howley and Hobart L. Harmon. In press. $20.

___ Standards Implementation Indicators: Charting Your Course to High Achievement (2000)

An easy-to-use tool to help school leaders look at their progress toward standards-based instruction. Includes six indicators, a profile chart, and a planning form. $14.95.

___ The ABC's of Parent Involvement (1998)

This book offers information, inspiration, ideas, and expert advice to parents with children of all ages. AEL's Family Connections staff contributed early childhood knowledge. 134 pp. Single copies are $3, and a box of 50 costs $70 east of the Mississippi or $75 west of the Mississippi, shipping included.

___ UnCommon Knowledge: "The Voices of Girls" Documentary (2000)

Girls from one of the poorest rural counties in the United States surprised their families, teachers, and even themselves on a three-year exploration of the science and mathematics of everyday life. See the powerful impact of the Voices of Girls project, funded by the National Science Foundation and operated by AEL. Videotape, $15; 57 minutes.

UnCommon Knowledge: Guides for Hands-on Science and Math (2000) (W)

Volume One includes activities on the science of folk medicine and natural dyes, the science of nutition, and the science of food preservation. Volume Two contains the mathematics of quilting and making art through mathematics. The guides are free and available only from the ERIC pages of AEL's Web site at http://www.ael.org/eric/voices.

Information Search Packages

These are excellent references for policymakers, parents, and the public. Included are reprints of articles from journals, newsletters, and periodicals; ERIC Digests; an ERIC search; and information about AEL-produced materials and other resources.

___ Block Scheduling (1996) $15; 142 pp.
___ Finding Answers to School Violence (1999) $30; 272 pp.
___ Technology in Education (1998) $15; 136 pp.

AEL Information (free)

___ QUILT—Questioning and Understanding to Improve Learning and Thinking—a nationally validated, research-based professional development program

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124

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Research Notes

(continued from page 3)

state average on reading achievement. Half of its students were eligible for free or reduced-price lunch, and student mobility hovered at the 40% rate. Researchers explored Emerald's early reading program in an attempt to identify factors that placed it among the top-performing high-poverty schools in its state.

The study looked for patterns of resource allocation, arrangements between classes, and schoolwide structures that facilitate high levels of student reading performance. Information came from interviews with the principal and program staff, survey responses, school and classroom observations, informal conversations, artifacts, and public data. One critical component of success was a literacy rotation in which first-grade students had access to four small-group instructional approaches for two hours per week.

Emerald was often characterized as pragmatic and willing to engage in problem solving. Its planning and management structures ensured open lines of communication and enabled teachers to be proactive about the changing needs of each child. Professional development was highly valued and individual staff expertise was respected and utilized. Staff at all levels collaborated to increase reading achievement. Emerald viewed opportunities presented by federal and state initiatives such as Title I as chances to exercise creativity.

This report points out five key elements that contributed to Emerald's success: a focus on student reading outcomes; multiple reading programs in every classroom; shared responsibility for student success; strong leadership at school and classroom levels; and a veteran, knowledgeable staff. The authors hope their intensive study will point educators toward potential directions for program development and resource allocation at other schools.

The Contexts of Comprehension: Information Book Read Alouds and Comprehension Acquisition by Laura B. Smolkin and Carol A. Donovan, CIERA Report No. 2-009

Comprehension is essential for skilled reading. Though teacher modeling of comprehension strategies is considered critical to mastering comprehension, the direct teaching of these strategies has recently decreased. Also, storybooks (which form the basis of many primary reading programs) may not support tasks such as learning new concepts from text—a comprehension skill that becomes increasingly important in later grades. In a recent report, researchers examine the strategies a first-grade teacher modeled while reading information books aloud in class.

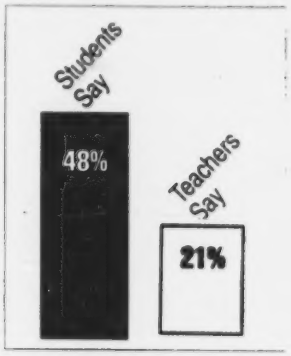
Working from tape-recorded read aloud sessions, the authors studied student and teacher responses during the reading of six storybooks and six information books. They considered whether the different genres prompted different types of participant interactions, and coded student and teacher talk to determine the number of comprehension-related remarks made during sessions.

The authors conclude that interactive information book read alouds may lead children to engage in more meaning-making efforts. The read alouds provided a context for scaffolding, modeling, and engaging in direct comprehension instruction, which offered students opportunities to engage interactively in discussions designed to clarify concepts and construct meaning. This interactivity is crucial; children's queries and comments compel teachers to make text meaning and their own thought processes explicit. Developing an interactional stance during reading, say the authors, is critical to promoting comprehension acquisition.

Informational texts are useful choices because they emphasize construction of concepts. They also tend to appeal to certain children—often boys and ethnic or racial minority groups—with whom traditionally European-American stories may not resonate.

Students Always Bored in School

When asked how engaged teens are in school, students and teachers had very different perceptions.



From the *Metropolitan Life Survey of the American Teacher 2000*. See Teens and School, page 3.

Grant Opportunities

Playground Grant Sources

When you need funding for equipment (other than instructional technology) it can sometimes be hard to find. The SchoolGrants Web site offers a special section on playground funding sources and fund-raising ideas.

Go to http://www.schoolgrants.org/Links/playground_funding.htm.

Federal Programs

NASA: Urban Community Enrichment Program

Purpose: To capture, channel, and enhance the interest of teachers and students in science, mathematics, engineering, technology, and geography.

This three-day program is specifically designed to serve urban middle school students and includes lectures, demonstrations, and structured classroom activities, as well as training for core teachers in how to conduct interdisciplinary aerospace activities.

Deadline: Open

Additional information available from NASA Headquarters, Education Division, Attn: UCEP Program Manager, Code FE, Washington, DC 20546

Department of Energy: Albert Einstein Distinguished Educator Fellowships

Purpose: To support the intellectual and professional development of teachers who wish to contribute their professional expertise and be involved in the advancement of science, math, and technology education.

Selected teachers spend a year in Washington, DC, working in a Congressional office, federal agency, or the White House. Award includes a monthly stipend and moving expenses.

Deadline: February 1, 2001

Information and application available on-line at http://www.scied.science.doe.gov/einstein/index.htm, by phone from Cindy Musick at 202-586-0987, and by e-mail to cindy.musick@science.doe.gov

Foundations

Bayer/NSF Award for Community Innovation

Purpose: To give students a high-energy, hands-on experience with science and technology while helping communities in the process.

Open to students in grades 6, 7, and 8, this competition offers an all-expense-paid trip to Epcot Center, a $25,000 Columbus Foundation Community Grant, and savings bonds for student team members. The cross-curricular activity sets a team of four students the task of identifying a community problem, looking into it, coming up with an innovative solution, and having fun as they do it.

Deadline: January 31, 2001 (register your team earlier, if possible)

Guidelines, coach's guide, student guide, and information available on-line at http://www.nsf.gov/od/lpa/events/bayernsf/intro.htm

Mathematics Education Trust: Toyota TIME

Purpose: To support innovative projects that enhance mathematics education within a school.

K-12 classroom teachers with three years' experience teaching mathematics can apply for up to $10,000.

Deadline: January 10, 2001

Application and information available on-line at http://www.nctm.org/about/toyota, by e-mail to toyotatime@nctm.org, or by phone at 888-573-TIME

National Geographic Society: Teacher Grants

Purpose: To advance and help improve the teaching of geography.

Grant areas may include classroom, school, and district efforts to implement the new National Geography Standards; hands-on and field experiences that involve students and teachers; and professional development in geography for teachers. Grants will range up to $1,250.

Deadline: March 15, 2001

Application available on-line at http://magma.nationalgeographic.com/society/ngo/foundation/q11.html or by mail from Program Officer, National Geographic Society Education Foundation, 1145 17th St., NW, Washington, DC 20036-4688

Verizon Foundation: Teacher Fellowship Grants

Purpose: GIFT (Growth Initiatives for Teachers) encourages innovative math and science teaching by providing funds for professional development and hands-on classroom projects.

This program for middle, junior high, and high school teachers begins with a one-week summer seminar and continues throughout the following school year. Each year 140 GIFT Fellows are selected.
Deadline: January 14, 2001
Application and information available on-line at http://foundation.verizon.com/04010_a.html

AAUW Educational Foundation: Community Action Grants

Purpose: To provide seed money for innovative programs or nondegree research projects that promote education and equity for women and girls.

Two types of grants are available: one-year grants for start-up projects, and two-year grants for projects focused on K-12 girls' achievement in math, science, and/or technology, and that involve community/school collaboration. The American Association of University Women has members and branches across the country, and grant proposals that involve collaborations with AAUW will receive funding preference.
Deadline: February 1, 2001
Information and application available on-line at http://www.aauw.org/3000/fdnfelgra/cagbd.html

AAUW Educational Foundation: Eleanor Roosevelt Teacher Fellowships

Purpose: To provide professional development in gender equity and math, science, and/or technology to women K-12 public school teachers; to support implementation of innovative curriculum projects to encourage girls' interest and achievement in math, science, and/or technology.

The fellowship year begins with a one-week summer institute that includes intensive workshops and group discussions. Fellows develop study plans, refine projects, and learn about the latest research on gender equity and new teaching strategies.
Deadline: January 10, 2001
Information and application available on-line at http://www.aauw.org/3000/fdnfelgra/ertfbd.html

Other

Dow Chemical Company: Education Initiatives

Purpose: To benefit Dow communities and to promote systemic education reform in math and science.

School districts, school boards, and communities may submit proposals in three areas: math and science, teacher training, and parent involvement. (Requests may be for donations of cash, products, research grants, in-kind services, or volunteered time. Individual schools or teachers may not apply.)
Deadline: Open
Information and application available on-line at http://www.dow.com/about/corp/social/gen_fund.htm

Space Explorers, Inc.: NASA Marslink Initiative

Purpose: To provide innovative and motivating educational programs by bringing current NASA missions into classrooms across the country.

Marslink and other NASA programs are available to all schools that can pay the usual fees ($500 for Marslink). This initiative pays $275 of the fee so that grant schools need supply only a $225 match. Grants will be given to one school in each congressional district on a first come, first serve basis.
Deadline: Open, but act quickly.
Information available on-line at http://www.space-explorers.com, by phone from Tim Lewaren at 800-965-3763 ext. 262, or by e-mail to tim@space-explorers.com

Earth & Sky: Young Producers Contest

The Earth & Sky radio series, heard daily on many public radio stations, discusses questions and issues related to science in a child- and youth-friendly format. Each year, with support from the National Science Foundation, the show's producers select five shows produced by students. Each must be 75 seconds long, in English, about any science topic, and produced by a team of up to four students.

Winners will receive savings bonds and their shows will be broadcast as part of the Earth & Sky series.

Entry deadline is December 15, 2000. Information and entry forms available on-line at http://www.earthsky.com/Teachers/YP, by e-mail at contest@earthsky.com, and by mail at Young Producers, c/o P.O. Box 2203, Austin, TX 78768.

127

Publications of Interest

(continued from page 6)

Data for Better Decisions

Schools hear more and more about the importance of data-based decision making, but too often the only data school leaders have at their fingertips are grades and test scores. A new toolkit from the School Change Collaborative, part of a Laboratory Network Program to which AEL belongs, introduces four self-study processes that can help schools gather targeted information for making reform and improvement decisions.

These research-based tools offer tested ways for a school community—students, administrators, teachers and staff, parents, and other community members—to work together to improve student learning.

- **Data in a Day** allows a school to involve many stakeholders and quickly gain data on instructional or climate issues important to the school community.
- **Structured Reflection Protocol** employs a time-efficient dialogue process centered on improving student learning and work.
- **Student-Led Focus Group** lets students speak out and enables adults to listen and use what they hear.
- **Analyzing Surveys with Kids** engages students as a school-data collection and analysis workforce.

The *Listening to Student Voices Self-Study Toolkit* is packaged in two parts. The first includes a 10-minute overview video, an introductory booklet, and four school stories that explain how the tools have been used in schools. The second is a "how to" toolkit with three videos that introduce individual processes and four guidebooks (one for each process). The guidebooks include additional school stories, blackline masters for handouts and overhead transparencies, and pragmatic advice for those who are leading the process and those who are using it.

For more information or to order, visit the Northwest Regional Educational Laboratory Web site at http://www.nwrel.org and search for the student voice toolkit.

Assessment that Fits the Student

In a perfect world, teachers would know each learner's strengths and needs and be able to tailor learning experiences and assessments to fit. In reality, teachers must help all students meet common standards while recognizing that their paths to success may vary significantly—especially for those students whose language or culture is different. This publication provides research information and practical ideas for modifying assessments to make them more effective.

Making Assessment Work for Everyone: How to Build on Student Strengths was created by the Assessment Laboratory Network Program. It can help educators understand the essential characteristics of good assessment, uncover the strengths and cultural perspectives of diverse learners, increase the awareness of potential sources of bias or inequity in assessments, and use strategies to make assessments more equitable.

The 292-page book costs $20 (discounts for five or more copies) plus shipping and can be ordered from WestEd, 730 Harrison Street, San Francisco, CA 94107; phone 415-615-3144 or e-mail Thomas Ross at tross@wested.org.

Testing and English Language Learners

A recent publication from the Council of Chief State School Officers aims to guide educators and other experts by identifying the phases during test development and implementation when intervention for English language learners should occur. It provides research-based information on developing and administering tests and lays out a framework to help determine if test items are accessible, to define elements important in writing accessible questions, and to provide advice for using specific types of tests.

The guide addresses specific recommendations to state education agency staff, test publishers, educators, policymakers, and other experts. *Ensuring Accuracy in Testing for English Language Learners: A Practical Guide for Assessment* costs $15. Order on-line at http://publications.ccsso.org or phone the Council of Chief State School Officers at 202-408-5505.

Video on Assessment

A new video from the National Center for Research on Evaluation, Standards, and Student Testing (CRESST) shows the implementation of research-based assessments in Hawaii, using the downfall of the Hawaiian monarchy as a dramatic background. Topics include the research behind the models, assessment development, administration, and scoring.

In *Assessment Models*, teachers describe the value of the scoring process as well as their reactions to student performance. Middle and secondary school students discuss the challenging assessments, which require them to write comprehensive essays using what they learned in school and original source materials.

The video was selected as a 2000 Distinguished Achievement Award finalist by the Association of Educational Publishers and was accepted by the National Education Telecommunications Association for satellite broadcast around the nation.

The 23-minute video costs $15 plus shipping and tax if applicable. To order, contact Kim Hurst at 310-794-9140 or kim@cse.ucla.edu.

The Gateway℠

The Gateway to Educational Materials (GEM) offers something to almost everyone involved in education. This consortium effort, a project of the U.S. Department of Education, offers quick, easy, and free access to the substantial, but uncataloged, collections of educational materials found on various federal, state, university, nonprofit, and commercial Internet sites.

Teachers can use GEM to search more than 140 sites for lesson plans, instructional units, and other free educational materials—and can submit their own lesson plans for use by other teachers. Students and parents can research education-related topics and programs.

Visit The Gateway Web site at http://www.thegateway.org.

Reaching All Families

Open houses, school-parent compacts, early home visits, and parent-teacher conferences are some strategies for opening up communication between educators and parents. A new edition of a popular booklet from the U.S. Department of Education explains these and other ways to help even seasoned teachers and administrators do a better job of making their schools family-friendly.

Accumulated knowledge and fresh ideas are combined with suggestions for action to make *Reaching All Families: Creating Family-Friendly Schools—Beginning of the School Year* useful to educators and community members. Get the free publication on-line at http://www.ed.gov/pubs/schoolinvolvement or order by phone. Call toll-free 877-4ED-PUBS.

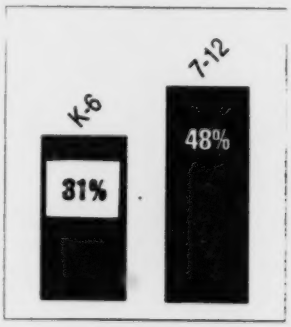
New Science Press

The National Science Teachers Association (NSTA) recently created the NSTA Press, an effort to ensure the continued development of new and innovative materials for science educators and to make them more widely available to teachers. One of the publisher's first ventures is the creation of Read It!, an on-line venue where teachers can preview the newest NSTA Press books

(continued on page 12)

Parents Feel Alienated from School

When asked if they feel that what they think doesn't count at school and if they feel left out of things going on there, parents agreed. Feelings of disconnection grew as children entered secondary school.



From the *Metropolitan Life Survey of the American Teacher 2000*. See Teens and School, page 3.

Publications of Interest

(continued from page 11)

and where full texts of selected books will be available free.

Electronic versions of some recent publications are already available, including *The Creation Controversy and The Science Classroom* and the Science-by-Design series of projects. Visit the NSTA Web site at http://www.nsta.org. To read NSTA Press books on-line, go to http://www.nsta.org/store and click on the Read It! icon. No special software is needed to read the publications.

Aligning Resources to Support Student Achievement

North Central Regional Educational Laboratory's (NCREL) newest addition to the Critical Issues series addresses how schools can make more productive use of their resources to improve student achievement. *Critical Issue: Rethinking the Use of Educational Resources to Support Higher Student Achievement* illustrates that as districts begin to support schools in becoming increasingly accountable for results, they are finding that schools need more time and individualized attention for students in academic subjects, time and dollars for professional development and planning, and funding for new curriculum materials and implementation of teaching practices aimed at higher standards.

The audio-enhanced document shows that by building on an understanding of school needs, districts can realign resources to support changes and augment promising practices. After existing resources have been changed, the district will be able to argue more forcefully for support of any underfunded initiatives. Reallocation strategies used in high-performing schools are featured.

Visit NCREL's Pathways to School Improvement Web site at http://www.ncrel.org/sdrs/areas/issues/envrnmnt/go/go600.htm.

AEL is a private, nonprofit corporation. AEL serves as the regional educational laboratory for Kentucky, Tennessee, Virginia, and West Virginia. For these same four states, it operates the Eisenhower Regional Consortium for Mathematics and Science Education. In addition, it serves as the Region IV Comprehensive Center and operates the ERIC Clearinghouse on Rural Education and Small Schools. AEL's primary source of funding is the Office of Educational Research and Improvement (OERI), U.S. Department of Education. This publication is produced with funds from OERI contract number RJ96006001. The contents herein do not necessarily reflect AEL or OERI policies or views.

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Vol. 20, No. 1

THE LINK

A PUBLICATION FOR EDUCATION PRACTITIONERS

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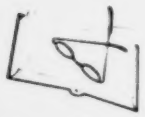
School Improvement:

The View from the Inside

AEL proudly announces the publication of a book designed both to capture the experiences of researchers and schools engaged in improvement and to inspire and assist the continuous improvement efforts of many more schools.

The opening pages of this issue of The Link *are reprinted from* Inside School Improvement: Creating High-Performing Learning Communities. *More about the book, including ordering information, appears on the order form/insert between pages 6 and 7.*

Yes, It Really Is Up to Us



Brenda Williamson, former principal of Man High School, tells a story of her successful attempt to open up the conversation and have teachers confront the discrepancies between their beliefs—mostly unspoken—and their actions.

I knew that our staff needed to spend time clarifying beliefs and setting a new vision for our school. The new strategy I had learned at a recent Quest rally, called Data on Display, seemed likely to be able to help us do that. But, I was worried. All too often, I had heard teachers shift blame to the home by saying things like, "If parents valued education, then we might see improvements in student learning." This kind of finger-pointing was not going to solve our problems. What would happen if I encouraged teachers to honestly voice their opinions? If the "same-old, same-old" attitudes were expressed, I was worried that I might be up the creek without a paddle. I wondered if teachers truly believed that what we did at school made little real difference. Could they believe that what really made the most difference was what students had, or didn't have, at home?

(continued on page 3)

AEL

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See the stories at left and on the front of the insert/order form inside this issue.

IN THIS ISSUE

Research Notes

The Sheltered Instruction Observation Protocol; Personalizing Culture Through Anthropological and Educational Perspectives; The Role of Classroom Assessment in Teaching and Learning; Assignments as an Indicator of Practice; Adding It Up: Helping Children Learn Mathematics, p. 4

Publications of Interest

Early Childhood Videos: Understanding IDEA; Ed Resources Online; Professional Development in Real Schools; Policies for Professional Development; Parent's Internet Guide; High School Teaching Innovations; Guide to Initiating and Sustaining Reforms; Assessment Literacy Primer; Focus Groups to Assist Reform; School-to-Career Benchmarks; Guide Helps Rural Schools and Communities Work Together; Using Collaborative Action, p. 7

New Resources from AEL

Inside School Improvement: Creating High-Performing Learning Communities, insert/order form

Grant Opportunities

Federal, Foundation, and More, p. 8

The Link is free to educators in the AEL region. Readers are encouraged to reproduce its contents, giving proper credit. On request, AEL will provide camera-ready copy on white paper. Current and many back issues are available in PDF at http://www.ael.org.

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Data on Display: Clarifying Beliefs in Community

Too often, important beliefs and values are not articulated and discussed within a school community. Consider the teacher who asks more questions of high-achieving students than low-performing students. This teacher acts on a deep-seated belief about ability, based on any number of personal and academic factors, which affects his own expectations for students' performance and which, in turn, affect the actual performance of many of the students in a given class.

This belief would, undoubtedly, be uncomfortable to voice aloud; it might go something like this: *This group of students will make it. They have a supportive home environment, a track record of success, and the proper attitude. However, those other students may not make it. I'd be surprised if they could overcome the obstacles in their paths.*

A school that boasts a strong culture for learning sets the clear expectation that *all* students will succeed. No student "gets by" without extra effort on the part of the school community to ensure his success. No teacher is allowed to "give up" on any group of students.

Data on Display: The Process

Data on Display helps a school establish a risk-free environment in which members of the school community can reflect individually on core issues, see how their opinions compare to those of the group as a whole, and think about and discuss issues deeply—all within a short period of time.

Purpose: To generate data quickly from a large group of people and move individuals from thinking about their own responses to thinking about implications of the groups' responses. This approach may prompt participants to form hypotheses about the data and to examine assumptions (their own and others').

Time required: The process can be completed in 40 to 60 minutes, depending on the size of the group and the number of issues examined.

Group size: 20-100 participants

Materials: Each participant will need a pen or pencil, a copy of the statements being examined, and several 1" x 3" Post-it notes (a different color for each statement). The facilitator will need several sheets of poster paper or chart paper for the data charts.

Rationale: The process allows for individual response and reflection but does not strengthen participants' attachment to individual responses. Individual responses are represented by colored Post-it notes that anonymously mark positions on a scale ranging from 0 to 100. After everyone contributes a blank Post-it note to the data chart, individuals immediately see a graphic representation of the thinking of the group. Participants are given time to reflect individually and in groups on the meaning of the data.

Preparation: Develop a handout with 4 to 6 statements on issues to be examined. The purpose of these statements is to elicit opinions about core ideas. (See example that follows.) Charts should be posted around the room. Each chart displays one statement across the top. Down the left edge of the chart, marked off in 10-point increments, is a scale from 0 to 100.

There should be sufficient room between numbers (3 inches) to allow for the colored Post-its that will be placed on the chart.

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Recently, AEL became the first education institution in the world to use new Digimarc MediaBridge technology, which uses digital watermarks to instantly link printed materials with the World Wide Web. You can recognize any Internet-enabled page by the symbol you see at the left and in the green bar below.

Most pages of *The Link* contain an image (a star) embedded with a Digimarc. When you hold the star up to a digital camera that is connected to your desktop computer, the Digimarc MediaBridge software reads the watermark, activates your Web browser, and delivers AEL's Web site to your screen. From there, you will be able to launch related Web sites and access a wealth of information—without typing long URLs.

Please join us in exploring the benefits of this evolutionary technology. Go to http://www.LookForTheD.com to download and install the free Digimarc MediaBridge software. This technology is new and glitches may occur, but it promises to expand the way we read and use printed materials.

The View from the Inside

(continued from page 1)

The day came, and we plunged in. Teachers were so involved with assessing their own beliefs, they forgot to look around or listen to what others were saying. They took their jobs seriously. There were no side conversations. The concentration was nearly tangible. Teachers bustled about, putting their yellow, green, pink, and blue Post-it notes on each graph. Again, I felt the potential results of this project weigh heavily upon me. What if they all abdicated their responsibility? Could I ever help to change their feelings?

After the data collection and analysis were finished, the results revealed that staff believed teachers made the difference! Over 85 percent believed that strong, caring teachers could help students believe in themselves, even students from economically and educationally disadvantaged backgrounds. As we discussed these beliefs, we moved to adopt a new teacher faculty motto:

Success. If it is to be, then it's up to me!

Sample Individual Worksheet for Data on Display

Successful Learners—What's the Potential for Influence?

I. **Directions:** For each statement below, decide the extent to which you agree by circling one of the percentages—from 100 percent to 0 percent—following the statement. Use your own personal experience and observations; there are no "right" answers in this activity.

1. In my opinion, students at my school are successful learners.
   100 90 80 70 60 50 40 30 20 10 0

2. What teachers in my school do, or fail to do, determines how successful students are as learners.
   100 90 80 70 60 50 40 30 20 10 0

3. Parents' and other family members' attitudes and involvement in students' education account for their success as learners.
   100 90 80 70 60 50 40 30 20 10 0

4. The school itself—its climate, policies, rules, procedures, structures, and physical facilities—impacts students' success as learners.
   100 90 80 70 60 50 40 30 20 10 0

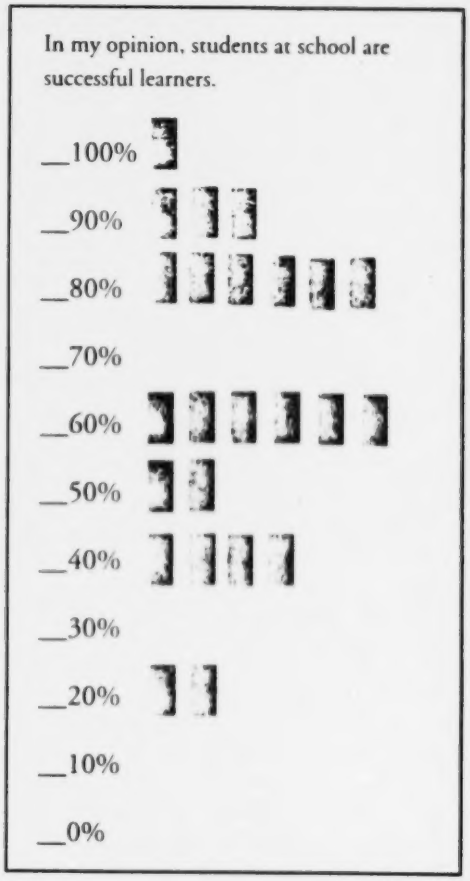
5. What students do themselves, or fail to do, is responsible for their success as learners.
   100 90 80 70 60 50 40 30 20 10 0

II. **Directions:** When you have completed your ratings, use the colored strips to record your responses (percentages) on the wall charts for each question.

III. **Group Discussion:** When everyone in your group has completed recording their responses on the wall chart, begin discussing the five statements and the patterns of response that have been posted by the group. As you look at the data, what questions do you have? What inferences can you make?

133

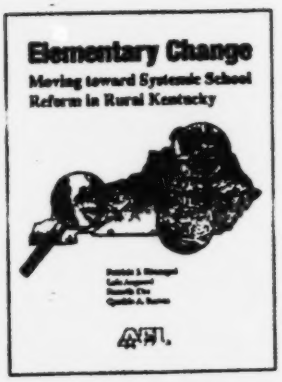
Sample Wall Chart for Data on Display



Research Notes

The U.S. Department of Education's Office of Educational Research and Improvement funds research through regional laboratories, national centers, and field studies.

Research from the nation's 10 regional laboratories can be accessed through a Web site at http://www.relnetwork.org. The work of the 12 national centers is available at http://research.cse.ucla.edu.



This book presents findings from AEL's 10-year study of education reform in Kentucky. See the insert/order form in this issue for ordering and more information.

From the Center for Research on Education, Diversity and Excellence (CREDE)

CREDE publications can be downloaded free or ordered online at http://www.cal.org/crede/pubs. Or, send a check, purchase order, or credit card information, plus 10% for shipping and handling, to Center for Applied Linguistics/CREDE, 4646 40th Street NW, Washington, DC 20016. Phone 202-362-0700 or e-mail credepubs@cal.org.

The Sheltered Instruction Observation Protocol: A Tool for Teacher-Researcher Collaboration and Professional Development by Deborah Short and Jana Echevarria (1999, EPR 3, $5.00)

This report describes a research-based model of sheltered instruction, an approach where teachers use specific strategies to teach content curriculum (e.g., social studies or math) to English language learners while promoting their English language development. The project was designed with the belief that teacher professional growth can best be fostered through sustained collaborative inquiry between teachers and researchers. The report presents the Sheltered Instruction Observation Protocol, which is used by teachers to plan lessons and by researchers to measure implementation of the model. The collaborative role of teachers and researchers in developing this model is explained.

The protocol contains three major sections—preparation, instruction, and review/evaluation. Examples of strategies listed under "instruction" include these:

- Provide ample opportunities for students to use strategies such as problem solving, predicting, organizing, summarizing, categorizing, self-monitoring.
- Use scaffolding techniques throughout the lesson to provide the right amount of support to move students from one level of understanding to a higher level.
- Use a variety of question types (e.g., literal, analytical, and interpretive) including those that promote higher-order thinking skills throughout the lesson.

More about sheltered instruction and additional resources for integrating language and content instruction are linked to the online description of this report.

Personalizing Culture Through Anthropological and Educational Perspectives by Rosemary Henze and Mary Hauser (2000, EPR 4, $5.00)

This report is written primarily for teachers and teacher educators who are grappling with fundamental cultural questions: *Who are my students? What kinds of cultural influences shape their lives? How do they—and I, as their teacher—shape and construct this culture on an ongoing basis? What are my own cultural assumptions and how do they influence my teaching?*

Much has been written about how schools should respond to the needs of diverse learners and how teachers should alter curricula and teaching practices to accommo-

date them. This report covers less-examined ground—the personalization of culture and how it can enhance teaching and learning. The report summarizes and synthesizes ideas that were exchanged at an institute titled *Exploring Culture: A Dialogue Among Teachers and Anthropologists.*

Understanding culture in a more personalized way, as daily lived experiences rather than as abstract constructs, helps teachers create a successful learning environment. Authors describe five themes that support teachers and teacher educators as they develop culturally responsive pedagogy in their teaching contexts. The five dominant themes are (1) exploring the ways that anthropologists and teachers can work together, (2) understanding culture as a process, (3) understanding the nature of conflict and power in considering the cultural aspects of education, (4) creating safe environments for discussion, and (5) educating for advocacy and activism.

Institute participants generated many examples of ways that both teachers and students can learn about their own culture as well as the cultures of others. Suggestions for how cultural knowledge can be applied to curriculum are described in the final section. These applications can also be implemented in working with parents and community and in developing advocacy agendas. The applications stem from the practice of the anthropologists and educators and may be adapted to a variety of educational settings.

The Role of Classroom Assessment in Teaching and Learning by Lorrie A. Shepard (2000, $8.00)

This occasional report develops a framework for understanding a reformed view of assessment, where assessment plays an integral role in teaching and learning. The author explains how classroom assessment practices must be transformed to help students learn. First, the content and character of assessments must be improved by representing important thinking and problem-solving skills in each of the disciplines. Second, the gathering, use, and view of assessment information by teachers and students must become a part of the ongoing learning process.

From the Center for Research on Evaluation, Standards, and Student Testing (CRESST)

Using Teachers' Assignments as an Indicator of Classroom Practice by Lindsay Clare (2000, CSE Technical Report 532)

This report describes research developing indicators of classroom practice for monitoring the influence of school reform initiatives on students' learning environments and supporting the improvement of instructional practice. The goal of the work is to develop a method to describe and assess classroom practice that has high technical quality, provides relevant and useful information to teachers and program leaders, and is efficient enough to be used in large-scale evaluation settings.

The work reported here was conducted during the second year of the study. It entailed collecting assignments and student work and observing classrooms in schools participating in a large-scale urban effort. In addition to showing promise for use in large-scale evaluations, the method identifies important dimensions of practice that could support teacher self-evaluation and reflection.

One appendix provides protocols that cover pre-observation interviews with teachers, descriptions of lesson activities, and classroom ratings. Another discusses examples of how instructional practices were identified during classroom observations.

The 71-page report can be downloaded at http://www.cse.ucla.edu/CRESST/pages/reports.htm. Print copies cost $6.00 and are available from CRESST/UCLA, 301 GSE&IS, Box 951522, Los Angeles, CA 90095-1522.

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(continued on page 6)

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Research Notes

(continued from page 5)

From the National Research Council

Adding It Up: Helping Children Learn Mathematics, Jeremy Kilpatrick, Jane Swafford, Bradford Findell, Editors; Mathematics Learning Study Committee, Center for Education (2001)

American students' progress toward proficiency in mathematics requires major changes in instruction, curricula, and assessment in the nation's schools, says this new report, which recommends a comprehensive and sustained effort among policymakers, administrators, teachers, university faculty, parents, and others.

"Too few students leave elementary or middle school with adequate mathematical knowledge, skill, and confidence for the nation to be satisfied with the condition of school mathematics," said Jeremy Kilpatrick, Regents Professor of Mathematics Education at the University of Georgia, Athens.

Results from state, national, and international assessments over the past 30 years indicate that U.S. students can perform straightforward computational procedures, but they tend to have a more limited understanding of fundamental mathematical ideas. They also have trouble applying mathematical skills to solve problems. And these trends may further impede the academic advancement of at-risk students.

Paramount in the report's recommendations is the finding that the nation can and should groom all students to be "mathematically proficient," mastering much more than disconnected facts and procedures. Moreover, this target should drive school improvement efforts, the committee emphasized.

Five intertwined and equally important strands comprise the committee's definition of mathematical proficiency. First, capable students should be able to understand and apply important concepts. They also should be able to compute with ease, formulate and solve problems, and explain their reasoning. Finally, they should have confidence in their abilities and view mathematics as a sensible and worthwhile subject. Each strand requires constant attention. The committee did not endorse any single approach to effective instruction, but recommended that teachers use students' informal understanding of mathematics as a stepping stone toward mastery of more challenging skills and concepts.

Beginning in preschool, educators should offer students opportunities to extend their rudimentary comprehension of numbers. In subsequent years, the curriculum should link calculation to everyday situations to help students make such connections. And it should illustrate numbers and operations in various ways. For example, one-half could be shown as a fraction, decimal, or percentage; a point between zero and one on a number line; or a shaded portion of a figure.

To better prepare teachers for math instruction, colleges and universities should create programs or courses that emphasize thorough knowledge of mathematics and of processes through which schoolchildren come to understand the subject. On the job, schools should give teachers more time and other resources—such as continuous and high-quality training, as well as useful instructional materials—to acquire a solid understanding of mathematics and improve their techniques. Teachers who have special training in the subject also should be available in all elementary schools to assist colleagues.

Prepublication copies are available from the National Academy Press. The report costs $35.00 (prepaid) plus shipping. Phone 800-624-6242 or read the publication free online at http://www.nap.edu/catalog/9822.html.

Inside School Improvement

Creating High-Performing Learning Communities

by Jackie A. Walsh and Beth D. Sattes

Public demands for improvement and accountability are being directed at every person involved in education—administrators, teachers, parents, community members, and the students themselves. This book is specially designed to "feed and nurture" the busy and dedicated people who are striving valiantly to meet these demands—especially education leaders who want to create high-performing learning communities in their schools. This kind of community draws on individual strengths to bring about continuous improvement. Included are practical tools, activities, and resources that you can put to work right away. Stories, reflections, and discussions of theory provide inspiration as well as food for thought and dialogue.

As you listen to teachers, principals, parents, and students speak honestly about what has worked (or not worked) in their schools, you will gain new perspectives on the importance of the learning culture in your school and the broader learning community in which schools operate. You will reconsider the roles of leadership, shared goals, and assessment. You will learn what it means to become, as well as to help create, a SMART learner (one who is Successful, Motivated, Autonomous, Responsible, and Thoughtful). By uniting the worlds of education research and practice, *Inside School Improvement* invites you to unleash the best and brightest inside yourself—and inside your school.

328 pages, $35, shipping & handling included
ISBN 1-891677-10-1

This book should be required reading for principals, teacher leaders, and school leadership teams. Schools, whether large or small, elementary or secondary, rural or urban or suburban, will benefit.
—Shirley M. Hord, Program Manager,
Southwest Educational Development Laboratory

Inside School Improvement has it right! The focus is on people—students for sure, but all other stakeholders as well.
—Bob Blum, Director, School Improvement Program,
Northwest Regional Educational Laboratory

This "must-have" road map offers schools the "just-in-time" support needed for a successful continuous improvement journey.
—Betty Hale, Vice President,
Institute for Educational Leadership

This is a *Fifth Discipline* for school folks.
—Argelio "Ben" Perez, Principal Transformations,
former associate superintendent, Lansing
School District, Lansing, Michigan

See inside for ordering information.

Resources Available from AEL

Some documents can be downloaded from our Web site (http://www.ael.org). Look for this symbol: (W)

___ **A Guide to Gender Fair Education in Science and Mathematics (1998)** (W)

This publication presents information gathered from the work of hundreds of teachers and researchers in the field of education equity. Highlighted activities are examples of programs supported by the U.S. Department of Education and National Science Foundation, as well as states, counties, and cities. It includes an annotated bibliography of programs for girls in grades K-12. $15; 40 pp.

___ **A Teacher's Guide to Project-Based Learning (2000)**

Introduces the ideas and methods that underpin project-based learning. Includes profiles for 13 types of projects, a step-by-step planning guide, an annotated list of references, and more. $16; 98 pp.

At a Glance: ADHD and IDEA 1997 (2000) (W)

This issue of *Policy Briefs* offers an overview of federal requirements as well as information specific to the AEL region. It and the monograph from which it was excerpted, *ADHD and School Law*, are available only on our Web site. Free. http://www.ael.org/rel/policy/adhd2000.htm.

___ **Briefs for Parents** (W)

These sets of six articles are ready to cut and paste into your newsletter, newspaper, or periodical. Each addresses a child development or education topic of concern to parents. They are available free (limit one copy of each set per order). Check the set(s) you wish to receive.

___ Brief articles for a general audience of parents (English only)

___ Spanish language brief articles for parents (with English translations) 1999 edition. http://www.ael.org/eric/parents.htm.

___ **Charter Schools: The Perspective from AEL's Region (1999)** (W)

This issue of *Policy Briefs* discusses the status of charter school legislation in Kentucky, Tennessee, Virginia, and West Virginia; regional concerns for policymakers; and effects of federal criteria on funding. $2; 8 pp. http://www.ael.org/rel/policy/charter.htm.

___ **Creating Safe Rural Schools (1999)**

In this videotape, educators who have designed and implemented safety programs at the state, district, and school levels suggest ways to create safe rural school settings. $15; 58 minutes.

Curriculum Mapping and Design Tool (2000)

A Web-based tool that helps teachers and administrators create and align curriculum to standards, collaborate and share materials, and map semester and/or yearly lesson plans. One-time set-up fee and annual subscription prices are based on school enrollment—call 800-624-9120 for information or to arrange an on-line demo.

___ **Curriculum Snapshots (2000)** (W)

This publication provides glimpses into the classrooms of real teachers to illustrate appropriate and creative uses of technology at all grade levels and within different subject areas. Contributing teachers name useful software, hardware, and supplementary resources. $10; 108 pp. Access to the companion Web site (http://www.ael.org/snapshot) and downloadable documents is free. The Web site offers a searchable database of lesson ideas and information on how to submit your own.

___ **Dissolving the Boundaries: Planning for Curriculum Integration in Middle and Secondary Schools (1999 revision)**

This publication helps secondary school faculties prepare for curriculum integration through a four-step process. The recent revision integrates technology use into the curriculum units. Book with 78-page facilitator's guide. $31; single or additional copies of book. $16; 83 pp.

___ **Distance-Based and Distributed Learning (2000)**

As more school districts and education institutions explore distance-based learning, they need to know what to think about as they design or acquire courses. This easy-to-use decision tree can help. $2.

Educational Software Use: Results from a 1999 Regional Survey (W)

A look at how teachers in Kentucky, Tennessee, Virginia, and West Virginia use software. Also includes a review of research on technology use and descriptions of software types. Go to http://www.ael.org/rtec/surintro.htm.

Educational Software Use: The 2000 Report (2000) (W)

This follow-up survey of teachers in the region looked at technology training, beliefs about the importance of software use, barriers to software use in the classroom, software selection practices, and more. Go to http://www.ael.org/rtec/survey.htm.

___ **Elementary Change: Moving Toward Systemic Reform in Rural Kentucky (2000)**

This book captures the results of AEL's 10-year, qualitative study of systemic school reform in four rural Kentucky school districts. It presents findings and recommendations to help educators and policymakers keep KERA on track. $20; 244 pp.

___ **Family Connections Parent Notebook**

The *Family Connections* learning guides are now in a notebook for parents and available in three volumes: *Family Connections 1* is for families of preschool children, *Relaciones Familiares 1* is the Spanish-language version, and *Family Connections 2* is for parents with kindergarten children. Each notebook contains a set of 30 four-page guides, plus tips for using them. $14.95 each ($11.95 without 3-ring binder).

___ **Graphing Calculators in Mathematics Grades 7-12** (W)

This resource guide offers lessons covering a wide variety of mathematical concepts and topics. Planned for teachers with no experience with graphing calculators and for those who have used the instruments since inception, these lessons emphasize hands-on problem-solving approaches, with connections to science and the real world. $39; 250 pp. http://www.ael.org/calculators.

___ **Improving Rural School Facilities: Design, Construction, Finance, and Public Suport (2000)**

While the condition of rural school facilities varies across the country, most rural school districts face similar issues. In this book, editors Sarah Dewees and Patricia Cahape Hammer present discussions of these issues from several perspectives. $18; 132 pp. (ISBN 1-891677-05-5)

___ **In Accord with Nature (1999)**

This book demonstrates how educators and youth leaders can help middle and high school students understand and define their relationship to nature and learn the importance of protecting the environment. Alternative teaching strategies and structured activities connect students with the natural and the built worlds. $19; 192 pp. (ISBN 1-880785-20-X)

___ **Inside School Improvement: Creating High-Performing Learning Communities (2000)**

The researchers, teachers, principals, parents, and students who collaborated on this book learned so much from their own school improve-

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ment efforts that they felt excited and obligated to share what they learned with others. They speak honestly about what has worked (or not) in their schools. Stories, reflections, and discussions of theory provide inspiration as well as food for thought and dialogue. Included are practical tools, activities, and resources to use right away. $35; 328 pp.

___ K-8 Building Blocks for Algebra (1998)

Recent research about the human brain supports what teachers have long observed: students learn by fitting new information with what they already know. This publication provides teachers with activities that bring the real world into the classroom and help children make sense of the relationships between numbers. $18; 108 pp.

___ Next Steps: Research and Practice to Advance Indian Education (1998)

Editors asked a dozen indigenous scholars and practitioners to help answer such questions as What is "Indian education" today? and How will it look in the future? The essays they received help readers explore the issues that face educators who work with indigenous students. $28; 317 pp. (ISBN 1-880785-21-8)

___ Notes from the Field: Evolution of the Primary Program in Six Kentucky Schools. Vol. 6, No. 1 (1998) Ⓦ

In this issue, researchers examine the development of the primary program in six rural Kentucky elementary schools. Based on eight years of research, the most detailed description comes from 1996-97, when researchers narrowed the focus of their work to the class of 2006. $2; 12 pp. plus 8-page supplement. http://www.ael.org/pnp/notes.

Notes from the Field: KERA in the Classroom. Vol. 7, No. 1 (2000) Ⓦ

In this issue, researchers present findings and recommendations based on analysis of data gathered during AEL's 10-year study of four school districts. http://www.ael.org/rel/policy/note2000.htm.

___ Patterns of Promise (2000)

This book describes exemplary uses of technology at 12 schools in the southeastern United States. Large and small, well-to-do and low income, urban and rural—these schools all take creative and innovative approaches to using technology and finding funding. $15; 116 pp.

___ Principal Connections (2000)

This CD-ROM can help school leaders examine their roles as technology leaders, identify barriers to technology integration, learn strategies to help teachers accept technology, and more. $99 (ask about multiple copy discount). The companion Web site provides supplements and updates to the CD-ROM and links to sites of interest to technology leaders (http://www.principalconnections.org).

___ Reaching Out: Best Practices for Educating Mexican-Origin Children and Youth (1999)

Harriet Romo of the University of Texas at Austin describes successful approaches to improving outcomes for this growing population of U.S. students. $24; 232 pp. (ISBN 1-880785-22-6)

___ Recruiting and Training Volunteer Tutors of Emergent and Beginning Readers (1998)

This manual identifies characteristics of effective tutoring programs; suggests ways to recruit tutors and select the students they'll work with; presents a model for conducting tutor training sessions; and provides activities tutors can use to help readers with comprehension, word study, and writing activities.

___ Trainer's package (90-minute video, 64-page manual, and 15 activity cards). $225.

___ Tutor's package (64-page manual and 15 activity cards). $30.

___ School-Based Programs to Promote Safety and Civility (1998) Ⓦ

This issue of *Policy Briefs* focuses on more than 20 primary and secondary level antiviolence programs, all of which get a thumbs-up from researchers. Complete contact information is provided for each program. $2; 12 pp. http://www.ael.org/rel/policy/schbas.htm.

___ Schools for Disruptive Students: A Questionable Alternative? (1998) Ⓦ

Recent legislation and commitments to provide safe learning environments have prompted states to create alternative schools for disruptive students. This issue of *Policy Briefs* reviews research and suggests indicators for judging the effectiveness of alternative school legislation. $2; 8 pp. http://www.ael.org/rel/policy/disrstd.htm.

___ Small High Schools that Flourish: Rural Context, Case Studies, and Resources (2000)

This book discusses small rural high schools in the United States and why we should care about them. It then takes a closer look at four particular schools located in communities of very modest means. Edited by Craig B. Howley and Hobart L. Harmon. $20; 200 pp.

___ Standards Implementation Indicators: Charting Your Course to High Achievement (2000)

An easy-to-use tool to help school leaders look at their progress toward standards-based instruction. Includes six indicators, a profile chart, and a planning form. $14.95.

___ The ABC's of Parent Involvement (1998)

This book offers information, inspiration, ideas, and expert advice to parents with children of all ages. AEL's Family Connections staff contributed early childhood knowledge. 134 pp. Single copies are $3, and a box of 50 costs $70 east of the Mississippi or $75 west of the Mississippi, shipping included.

___ UnCommon Knowledge: "The Voices of Girls" Documentary (2000)

Girls from one of the poorest rural counties in the United States surprised their families, teachers, and even themselves on a three-year exploration of the science and mathematics of everyday life. See the powerful impact of the Voices of Girls project, funded by the National Science Foundation and operated by AEL. Videotape, $15; 57 minutes.

UnCommon Knowledge: Guides for Hands-on Science and Math (2000) Ⓦ

Volume One includes activities on the science of folk medicine and natural dyes, the science of nutrition, and the science of food preservation. Volume Two contains the mathematics of quilting and making art through mathematics. The guides are free and available only from the ERIC pages of AEL's Web site at http://www.ael.org/eric/voices.

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Videos About Early Childhood

Ready to Learn, from the I Am Your Child Foundation, provides information that parents and caregivers can use to foster language and literacy development in infants and preschoolers. The English version is hosted by Jamie Lee Curtis and LeVar Burton, the Spanish version is hosted by Edward James Olmos, and booklets in both languages are also available.

The First Years Last Forever toolkit includes video, CD-ROM, and print materials. It, too, comes in both English and Spanish versions. *First Years* summarizes the latest brain research and covers a wide range of topics relevant to the first three years of life, including bonding and attachment, communication, discipline, self-esteem, child care, and more.

Other topics are also available—see the complete list at the foundation Web site. Videos and CD-ROMs cost $5 each, booklets cost $1, and they can be ordered through the U.S. Department of Education or the foundation. Phone toll-free 877-4ED-PUBS or visit the Web at http://www.iamyourchild.org/order/order.html or http://www.ed.gov/americareads.

Understanding IDEA

The IDEA Practices Web site is designed to help teachers, families, and others interested in improving educational results for students with disabilities. Visitors may sign up to receive IDEAnews, a monthly e-mail newsletter that offers information and resources to help professionals and families understand the Individuals with Disabilities Education Act and its implementation. Go to http://www.ideapractices.org.

Educational Resources Online

Nearly 1,000 organizations have been added to the Educational Resource Organizations Directory (EROD) in the past few months. The directory helps users identify and contact organizations that provide information and assistance on a range of education-related topics. Recent entries describe resources at the state level (such as PTA offices, library agencies, and correctional educational agencies) and the national level (information centers, associations, and clearinghouses). Visit http://www.ed.gov/Programs/EROD.

Professional Development in Real Schools

Teachers Who Learn, Kids Who Achieve describes professional development in eight schools selected under the Department of Education's National Awards Program for Model Professional Development. These schools are located around the country and include all grade levels, sizes, and demographic characteristics. At each, according to the introduction, "Teachers, paraprofessionals, and administrators have coalesced as learning communities and focused their own learning on what will translate into learning for students." The stories in the book tell how the school staffs focused their efforts, found time to learn, and created their collaborative environments. The book can be downloaded from WestEd's Web site at http://www.wested.org/wested/pubs/online/modelPD. To order print copies, send $9.95 each plus $4 or 10% (whichever is greater) for shipping to Publications, WestEd, 730 Harrison Street, San Francisco, CA 94107.

Policies for Professional Development

A recent knowledge brief from WestEd draws information about effective professional development from the work of Linda Darling-Hammond. *Career-long Teacher Development: Policies that Make Sense* discusses the importance of investing in high-quality teaching through good teacher preparation and development programs. The brief proposes that education needs "a

(continued on page 10)

Publications of Interest

Visit classrooms where technology is being effectively used. See the insert/order form for ordering and more information about this AEL publication.

Grant Opportunities

Disney's American Teacher Awards

Nominate a special teacher for the 2001 teacher awards. These awards honor gifted and dedicated men and women for excellence and creative contributions to the teaching profession.

Nominations can be made online at http://disney.go.com or toll-free by phone at 877-ATA-TEACH until March 31, 2001.

Federal Programs

U.S. Department of Education: 21st Century Community Learning Centers

Purpose: To award grants to rural and inner-city public schools, or consortia of such schools, to enable them to plan, implement, or expand projects that benefit the educational, health, social services, cultural, and recreational needs of the community.

The average award for a school-based center is expected to be $125,000. A center can provide expanded learning opportunities for children, youth, and families as well as a safe, drug-free, supervised after-school, weekend, or summer haven.

Deadline: March 30, 2001

Application and information available online at http://www.ed.gov/21stcclc or toll-free at 877-4ED-PUBS.

U.S. Department of Education: Emergency Immigrant Education Program

Purpose: To provide grants to state educational agencies to assist local educational agencies that experience unexpectedly large increases in their population due to immigration.

These grants are to provide high-quality instruction to immigrant children and youth, to help them make the transition into American society and meet the same state performance standards of all children and youth.

Deadline: March 16, 2001

Application and information available online at http://ocfo.ed.gov/fedreg/grantann/q101/011001c.txt or by phone at 202-205-8730.

U.S. Department of Education: Child Care Access Means Parents in School

Purpose: To support the participation of low-income parents in postsecondary education through the provision of campus-based childcare services.

Eligible Applicants: Institutions of higher education that have a total of $350,000 or more of Federal Pell Grant funds awarded to students enrolled at the institution for the preceding fiscal year.

Deadline: April 24, 2001

Applicable regulations, priority, selection criteria, application procedures, contacts, and other information are available in the Federal Register notice and online at http://ocfo.ed.gov/fedreg/grantann/q101/012201c.txt or toll-free at 877-4ED-PUBS.

U.S. Department of Education: 2001 High School Equivalency Program (HEP) and the College Assistance Migrant Program (CAMP)

Purpose: To provide grants to institutions of higher education or to private nonprofit agencies working in cooperation with IHEs, to help migrant and seasonal farmworkers complete high school and succeed in post-secondary education. Estimated average size of awards $350,000 to $385,000.

Deadline: March 23, 2001

Applicable regulations, contacts, and other information are available in the Federal Register notice and online at http://ocfo.ed.gov/fedreg/grantann/q101/012501a.txt or by phone at 202-260-1396.

U.S. Department of Education: Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP)

Purpose: To increase the number of low-income students who are prepared to enter and succeed in college.

Through improved academic preparation and early awareness activities, eligible students receive comprehensive mentoring, counseling, and supportive services. Through the scholarship component, mandatory for state grants and recommended for partnership grants, eligible students may receive scholarships.

For partnership grants, eligible applicants include an institution of higher education; one local educational agency (school district); and two additional organizations, such as businesses, professional

142

associations, community-based organizations, state agencies, elementary schools, and religious groups.

For state grants, eligible applicants are state agencies. Federal funds shall provide no more than 50 percent of the total cost of any project funded.

Deadline: March 30, 2001

Application available online at http://ocfo.ed.gov/fedreg/grantann/q101/011801b.txt or toll-free at 877-4ED-PUBS.

National Endowment for the Arts: Challenge America Fast Track Grants

Purpose: To support partnerships between arts organizations and community groups that highlight the potential of the arts to address key community concerns.

Every application must be submitted on behalf of a partnership that includes an arts organization. Approximately 400 grants of $5,000 or $10,000 will be awarded in rural or underserved areas; all grants must be matched 1-to-1 with other funds.

Deadline: May 1, 2001

Application and information available online at http://www.arts.gov/guide/Challenge/overview.html, by phone at 202-682-5700, or by mail at Challenge America, National Endowment for the Arts, Nancy Hanks Center, 1100 Pennsylvania Ave. NW, Washington, DC 20506-0001.

Foundations

Texaco Foundation: Touch Science Program

Purpose: To support teaching science in a hands-on, inquiry-based environment.

This program funds activities for children in grades K-2 to develop skills that will improve their study of math and science in higher grades. Proposals may include programs that partner with informal science institutions, programs with a strong potential to impact a systemwide science curriculum, programs that provide professional development and follow-up support in the classroom, and programs that support family involvement in school-based science activities.

Deadline: Open

Application and information available online at http://www.texaco.com/support/social/docs/touch_giving.html or by mail at Touch Science, The Texaco Foundation, 2000 Westchester Ave., White Plains, NY 10650.

Other

Center on English Learning and Achievement: Internet Grants

Purpose: To support student learning and teacher networking through funding teacher access to Internet resources.

Grants of up to $300 are available for any Internet project. Prepare a short description of the activities you propose to undertake and how a grant would assist and enhance student learning.

Deadline: Open

Information and applications available online at http://cela.albany.edu/news/grant.htm or write CELA, ED-B9, University at Albany, State University of New York, 1400 Washington Ave., Albany, NY 12222.

Curriculum Associates: Excellence in Teaching Cabinet Grants

Purpose: To support creative, easy-to-implement educational projects that incorporate both print materials and technology.

Educators in grades K-8 can submit descriptions of new projects or successfully implemented projects they wish to expand. Implementation must take place during the 2001-2002 school year. Three grants will be awarded, each to include $1,000 cash, $500 in products, and promotion of the projects.

Deadline: March 15, 2001

Information and application available online at http://www.curriculumassociates.com/cabinet/grantrules.shtml or by mail from Curriculum Associates, Excellence in Teaching Cabinet, P.O. Box 2001, North Billerica, MA 01862-0901.

National Rural Education Association Foundation: Essay Contest

Purpose: To encourage rural students in grades 3-12 to reflect on the value of living in a rural community.

Three categories—grades 3-5, grades 6-9, and high school—will respond to the question *How has rural America shaped my character?* Entries will be judged on originality, focus, mechanics, and overall quality. The elementary winner will receive $250 and winners of the other categories will receive $500 each.

Deadline: April 15, 2001

Guidelines and application available online at http://www.colostate.edu/Orgs/NREA/Essay-Guide.htm, by phone at 970-491-7022, or by mail from NREA Headquarters, Room 246, Education Building, Colorado State University, Fort Collins, CO 80523-1588.

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Publications of Interest

(continued from page 7)

standards-based reform of teaching, analogous to standards-based reform of schooling." The brief reports on progress toward such a system of teacher development, the relationship between teacher knowledge and student achievement, and how to get knowledge to teachers. It can be downloaded from the WestEd Web site at http://www.wested.org/wested/pubs/online/TeacherDev.pdf.

Parent's Internet Guide

The U.S. Department of Education has revised its free *Parent's Guide to the Internet*, which helps parents make use of the online world as an educational tool. It gives an introduction to the Internet and how to navigate it, and suggests how parents can allow children to safely use the Internet. The guide also includes information on using technology to benefit children with special needs, identifying community locations that offer free Internet access, selecting a home computer, and much more. Get a copy from the department's Education Publications Center. Phone toll-free: 877-4ED-PUBS.

High School Teaching Innovations

Written in an engaging style, *The Dynamics of Change in High School Teaching: A Study of Innovation in Five Vermont Professional Development Schools* provides an up-close look at how teachers and students supply the necessary energy to initiate organic change in high schools, and examines the process by which such innovations can be sustained in the broader educational system. Though all of the examples were drawn from professional development schools, they could have come from just about any school, as the authors succeeded in keeping the focus on high school reform in general. For this reason, the document's appeal can be broad—to policymakers, school administrators, and researchers as well as practitioners.

To get a free copy of this Lab at Brown publication, visit the Web at http://www.lab.brown.edu/public/pubs/catalog.taf or e-mail publications@lab.brown.edu. Mail requests to Publications, The Northeast and Islands Regional Educational Laboratory at Brown University, 222 Richmond St., Suite 300, Providence, RI 02903-4226.

Guide to Initiating and Sustaining Reforms

This guidebook describes 10 capacities that are associated with the developing stages of reform, including enhancing energy flow, teaming, and creating structures for decentralized decision making. It grew out of a research study focused on the processes schools use to initiate and sustain reforms. The purpose of the study was to learn more about how schools become successful and then maintain success. The aim of the publication is not to describe the attributes of successful schools, which has often been done in education research, but rather to describe the process of becoming a successful school and what it takes to do so.

What It Takes: Ten Capacities for Initiating and Sustaining School Improvement is intended for use by schools embarking on reform and also by state- and district-level policymakers. One of the primary goals is to help school staff ask questions that promote discussion and reflection about important issues, particularly those related to the capacities they have in place and those they need to develop. Another is to inform policymakers designing supports and incentives for schools that are trying to change practices.

To get a free copy of this Lab at Brown publication, visit the Web at http://www.lab.brown.edu/public/pubs/catalog.taf or e-mail publications@lab.brown.edu. Mail

144

requests to Publications, The Northeast and Islands Regional Educational Laboratory at Brown University, 222 Richmond Street, Suite 300, Providence, RI 02903-4226.

Assessment Literacy Primer

In these times of high-stakes assessment, many educators feel handicapped by a lack of knowledge about tests and testing. A recent publication from the American Youth Policy Forum helps to demystify the language of testing and the issues that surround it. *Thinking About Tests and Testing: A Short Primer in "Assessment Literacy"* explains statistical and test terminology by answering such questions as *What is a mean? What is statistical significance? What is validity in a test?* and *Do the SAT and ACT "work"?*

The 36-page booklet can be downloaded free at http://www.aypf.org/pubs.htm. For a print copy, send $5 to American Youth Policy Forum, Department 301, 1836 Jefferson Place, NW, Washington, DC 20036-2505.

Focus Groups to Assist Reform

For applied research that requires reflection on complex issues, focus groups represent an increasingly useful approach. *Discussing Reform: Tools for Facilitating a Focus Group* is a handbook that includes a set of tools designed for leading small groups in investigating the status of school reform. Developed as part of a study on the changing roles of state departments of education, these tools have been successfully adapted to discussions of varied but specific reform initiatives in very different state environments, including urban, suburban, and rural areas. At focus groups in which variations of these processes have been used, participants have reported finding conversations informative, provocative, and enjoyable. Available only in PDF at http://www.lab.brown.edu/public/pubs/catalog.taf.

Benchmarks for Success in School-to-Career

This book presents an intensive, detailed process for holding accountable all of the players involved in establishing community-connected learning as a whole-school reform strategy—schools, business and community partners, postsecondary partners, and school districts.

Benchmarks for Success in High School Education: Putting Data to Work in School-to-Career Education Reform describes the experiences of school districts in two communities—Boston, Massachusetts, and North Clackamas, Oregon—that are implementing and evaluating community-connected learning. Boston is an example of a district where school-to-career programs are becoming the rule in high schools. North Clackamas piloted community-connected learning on a very limited basis, and now has expanded it to include focused programs of study in all the district's high schools.

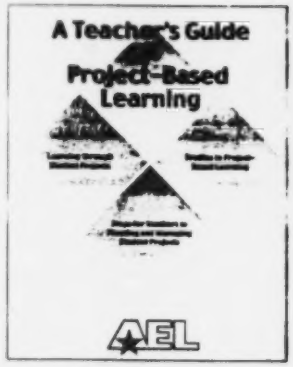
By tying real-world performance measures to each stage of program implementation, the benchmarking process provides concrete, realizable steps for which all participants in the reform process can be held accountable.

To get a free copy of this Lab at Brown publication, send a request by e-mail to publications@lab.brown.edu or mail to Publications, The Northeast and Islands Regional Educational Laboratory at Brown University, 222 Richmond St., Suite 300, Providence, RI 02903-4226.

Guide Helps Rural Schools and Communities Work Together

The nearest large grocery store, medical center, or movie rental place is 40 miles away. Most of the community members commute to a larger city in the region to work.

(continued on page 12)



Help your students become more active, responsible learners with this AEL publication. See the insert/order form between pages 6 and 7 for ordering and more information.

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Publications of Interest

(continued from page 11)

Questioning and Understanding to Improve Learning and Thinking

Learn to use questioning to improve student achievement and build a learning culture in your school. Attend the national QUILT training June 17-22. Get more information at http://www.ael.org/rel/quilt/meeting.htm or call 800-624-9120.

Everyone farms or ranches a little. These are realities of life in many rural areas, where educational challenges can be significantly different from those facing schools and communities in more populated areas.

A new guide from the Southwest Educational Development Laboratory provides resources and information designed to help rural schools and communities learn ways to support each other so that both can thrive. Available in print (English and Spanish) and on CD-ROM (English only), *Thriving Together: Connecting Rural School Improvement and Community Development* is for teachers, principals, parents, community members, students—anyone who is interested in and believes in the potential for effective partnerships between rural schools and their communities.

To order, contact Amy Averett at 800-476-6861 or by e-mail at aaverett@sedl.org, or visit the Web at http://www.sedl.org/pubs.

Using Collaborative Action

The Collaborative Action Team process brings people together and helps them learn how to work collaboratively to succeed with school improvement efforts. It guides the development of teams composed of family members, community representatives, school personnel, and students. Team members work to address pressing issues in their school communities by following the stages and steps of the process—Stage 1: Getting Started, Stage 2: Mobilizing the Team, Stage 3: Setting Direction, Stage 4: Taking Action, and Stage 5: Reviewing and Refining. *Creating Collaborative Action Teams: Working Together for Student Success* is available in print (English and Spanish) and CD-ROM (English), and may be bundled with *Thriving Together* (see previous item).

To order, contact Amy Averett at 800-476-6861 or by e-mail at aaverett@sedl.org, or visit the Web at http://www.sedl.org/pubs.

AEL is a private, nonprofit corporation. AEL serves as the regional educational laboratory for Kentucky, Tennessee, Virginia, and West Virginia. For these same four states, it operates the Eisenhower Regional Consortium for Mathematics and Science Education. In addition, it serves as the Region IV Comprehensive Center and operates the ERIC Clearinghouse on Rural Education and Small Schools. AEL's primary source of funding is the Office of Educational Research and Improvement (OERI), U.S. Department of Education. This publication is produced with funds from OERI contract number ED-01-CO-0016. The contents herein do not necessarily reflect AEL or OERI policies or views.

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146

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Vol. 20, No. 2

THE LINK

A PUBLICATION FOR EDUCATION PRACTITIONERS

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IAETE: Shaping Future Technologies for Today's Students

AEL was recently awarded the 2001-2005 national leadership designation for educational technology in the U.S. Department of Education contract to serve as the regional educational laboratory for Kentucky, Tennessee, Virginia, and West Virginia.

The leadership area award fit hand-in-glove with AEL's plan to establish the Institute for the Advancement of Emerging Technologies in Education (IAETE), a bridge to unite the organization's initiatives around new and emerging technologies and their applications to education.

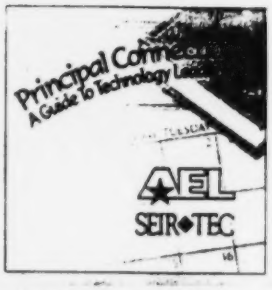
Fittingly, the technology leadership award takes the lab back to its roots. In the 1960s AEL pioneered the use of broadcast technology as a way to reach young children and their families. A daily television program called "Around the Bend" led young viewers through learning activities much like those advocated by recent brain research. Other early children's programmers—Bob Keeshan of "Captain Kangaroo," the producers of "Sesame Street," and Fred Rogers—visited AEL.

Today, many innovations offer opportunities for interactive learning. Exploring these new and emerging technology possibilities will be part of AEL's work through the new Institute, opening in Charleston, West Virginia, on May 11, 2001.

To provide an understanding of what the Institute is all about, executive director Tammy McGraw and associate director John Ross share their plans and hopes for the coming months.

McGraw. The Institute's mission statement will guide our work. It is "to promote the purposeful use of new and emerging technologies to improve teaching, learning, and school management." Too often, educational uses for new technologies come

(continued on page 2)



With the opening of IAETE (see story at left), we're thinking instructional technology. Look for AEL's technology-related products on these pages and find ordering information in the insert/order form at the center of this issue.

IN THIS ISSUE

Announcements
Thinker of the Year Award; QUILT National Training; Improving America's Schools Conferences; p. 3

Research Notes
Implementing Education Reform; 2000 Review of Research on KERA; Creating an Appetite for Change; p. 4

Publications of Interest
Beliefs That Drive Successful Schools; ISTE Publication Bridges "Digital Divide"; New Math and Science Resource; Advice for Students Cyberseries; Every Child a Reader; Captioned Media Program; New Emphasis on Reading; Unlocking CSRD Components; Standards for English as a Second Language; Education Data Resource; p. 6

New Resources from AEL
Making Resources Matter; Family Connections Early Start; Rural School Administrators' Resource Kit; order form/insert

Grant Opportunities
Federal, Foundation, and More, p. 8

The Link is free to educators in the AEL region. Readers are encouraged to reproduce its contents, giving proper credit. On request, AEL will provide camera-ready copy on white paper. Current and many back issues are available in PDF at http://www.ael.org.

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147

IAETE: Shaping Future Technologies

(continued from page 1)

"We hope to form partnerships with companies and researchers who are creating the technologies of the future to help them think about potential classroom applications."

—Tammy McGraw
IAETE executive director

after the fact and aren't nearly as efficient or effective as their business uses. At the Institute, we intend to look early, zero in on technologies that hold promise, and help shape their development to make them effective in schools.

Ross. Some of the technologies we'll explore are already familiar, by name at least, but haven't really been looked at from the K-12 perspective. Virtual reality is a good example of a tool that's being used by business, the military, and higher education to train engineers, pilots, and doctors, among others. But right now when you think about virtual reality and young people, you think of entertainment uses, not education ones. My work includes taking a look at virtual reality with K-12 uses in mind.

See how 12 schools—large and small, well-to-do and low-income, urban and rural—take creative and innovative approaches to funding and using technology.

McGraw. John and I both have backgrounds in education and technology. Our classroom experiences and knowledge of curriculum design help us look at technology innovations in a way that people outside education can't. We hope to form partnerships with companies and researchers who are creating the technologies of the future to help them think about potential classroom applications.

Obviously, with the Institute just getting off the ground, we have only a few partners right now. The virtual reality work John mentioned is being done in conjunction with Virginia Tech, with whom we're also working on an Internet2 project. The U.S. Department of Education has asked us to prepare a report on the first three years of the Technology Innovation Challenge Grant program, to look at those projects with an eye to capturing successes and identifying practices and components that could be replicated in other schools.

Ross. Although the Institute is an affiliate of AEL, we also consider AEL to be a partner. For 35 years AEL has been working with schools, districts, and states helping eduators transform the knowledge from research into practice—and learning from practitioners at the same time. This deep relationship with schools will be invaluable to the Institute's work.

And we should be sure to say that, although much of our work sounds theoretical, we fully intend to be practical as well. The Challenge Grant work is something that will have immediate application for schools, but we're also committed to developing products that can go into schools or classrooms in the near, rather than far, future. Last year, Tammy and I worked together on *Principal Connections*, AEL's interactive CD-ROM and companion Web site to help school principals build technology leadership skills. It's now being used in more than 16 states and in several large training efforts. Educators can expect more work like that from the Institute.

McGraw. As anyone who visits our office will see, part of IAETE's work is to model the use of state-of-the-art technology. We plan to provide opportunities for educators in the AEL region to see these technologies and help them think about what is or is not appropriate for their needs as they work with technology. We're establishing partnerships with vendors and service providers, such as Seneca Communications, to strengthen this element of our work.

Ross. Once we have that equipment in place, we'll be announcing more about the demonstration site, so we invite everyone to watch our Web site for information. It's still under construction, like everything else, but some pages are up and running and we're issuing news releases regularly. So please visit us at http://www.iaete.org.

Announcements

Thinker of the Year Award

In honor of Brain Awareness Week (March 12-18), Brain Channels awarded its first annual "Thinker of the Year" award. The site (http://www.BrainChannels.com) has won awards for its interactive design and thought-provoking content related to the human brain, evolution, and memory topics. The Thinker of the Year-2000 is Mihaly Csikszentmihalyi of the Department of Psychology at the University of Chicago. He has devoted his life's work to the study of what makes people truly happy, satisfied, and fulfilled.

Csikszentmihalyi is chiefly renowned for the notion of "flow" in creativity; people enter a flow state when they are fully absorbed in activity during which they lose their sense of time and have feelings of great satisfaction.

Mihaly Csikszentmihalyi is the author of many books, including *The Evolving Self: A Psychology for the Third Millennium; Finding Flow: The Psychology of Engagement with Everyday Life; Creativity: Flow and the Psychology of Discovery and Invention;* and *Flow: The Psychology of Optimal Experience.*

More information on Csikszentmihalyi's theories and work can be found online at http://www.brainchannels.com/thinker/mihaly.html.

QUILT National Training-for-Trainers

June 17-22, 2001
Ramada Inn and Convention Center
Lexington, Kentucky

Learn to use questioning to improve student achievement and build a learning culture in your school. The QUILT training-for-trainers approach helps school districts prepare local teachers who then train their colleagues.

QUILT focuses on effective questioning and incorporates practices linked to higher levels of student achievement. QUILT works at all grade levels, in all content areas, and in all settings.

A school training team generally consists of two or three teachers and the principal. Registration fee for the weeklong training is $675. Get more information at http://www.ael.org/rel/quilt/meeting.htm or call Shirley Keene at 800-624-9120.

2001 Improving America's Schools Conferences

The U.S. Department of Education has announced the following dates for *No Child Left Behind:*

East
October 17-19
Mobile, AL

West
November 13-15
Reno, NV

Midwest
December 17-19
San Antonio, TX

Watch the Web site at http://www.ncbe.gwu.edu/iasconferences for more information.

Csikszentmihalyi describes flow as "being completely involved in an activity for its own sake. The ego falls away. Time flies. Every action, movement, and thought follows inevitably from the previous one, like playing jazz. Your whole being is involved, and you're using your skills to the utmost."

Recently, AEL became the first education institution in the world to use new Digimarc MediaBridge technology, which employs digital watermarks to instantly link printed materials with the World Wide Web. You can recognize an Internet-enabled page by the symbol you see at the right and in the green bar below.

Most pages of *The Link* contain an image (a star) embedded with a Digimarc. When you hold the star up to a digital camera that is connected to your desktop computer, the Digimarc MediaBridge software reads the watermark, activates your Web browser, and delivers AEL's Web site to your screen. From there, you will be able to launch related Web sites and access a wealth of information—without typing long URLs.

Please join us in exploring the benefits of this evolutionary technology. Go to http://www.LookForTheD.com to download and install the free Digimarc MediaBridge software. This technology is new and glitches may occur, but it promises to expand the way we read and use printed materials.

The U.S. Department of Education's Office of Educational Research and Improvement funds research through regional laboratories, national centers, and field studies.

Research from the nation's 10 regional laboratories can be found on the Internet at http://www.relnetwork.org. The work of the 12 national centers is available at http://research.cse.ucla.edu.

Research Notes

From the Regional Educational Laboratories

In a three-phase study, the nation's 10 regional educational laboratories validated widespread perceptions that implementation of standards-based education reform is a complex endeavor. Researchers interviewed key leaders and practitioners about implementation strategies they found to be most successful. Phase 1 looked at the 50 states and the District of Columbia. Phase 2 narrowed the view to 16 school districts and phase 3 focused on 18 schools. Results from all phases are summarized in the study's six publications.

AEL led data collection in its region and coauthored the study publications. Educators from all four state departments of education (Kentucky, Tennessee, Virginia, and West Virginia) and Barren County and Oldham County Schools (KY) contributed to on-site interviews and document reviews during the five-year study.

The most recent product of phase 3 of the study, a 17-page issue brief titled *Implementing Education Reform: Strategies Used by States, Districts, and Schools*, provides 12 recommendations of methods (four at each level—state, district, and school) that practitioners used effectively.

Issues common across all levels of the system are using student learning standards as a foundation for reform work, enhancing teachers' capacity to provide effective instruction, and providing meaningful assessment of student achievement. The study's findings suggest that system levels influence each other to a large degree, and implementation of education reform requires attention to systemic alignment, consistent collaborative relationships, leadership, and ongoing review of progress. The key elements of approaches to eduation reform are identified as activities or characteristics of effective programs at each level.

State

- Align state assessment and accountability programs with standards.
- Focus state work on instruction and professional development.
- Involve all constituencies in development and review of state standards.
- Review state education reform policies and progress.

District

- Align district curriculum, instruction, and assessment to standards.
- Build capacity of district staff.
- Foster relations with district stakeholders.
- Attend to the allocation of district resources.

School

- Approach school reform systemically.
- Create collaborative school culture focused on instruction.
- Maintain constant leadership toward a shared vision.
- Monitor student learning for school improvement.

Now available from AEL are a limited number of print copies of phase 2 (district findings) products—an issues brief, *Education Reform: What Works for Districts*, and a report, *District Approaches to Education Reform*. *Implementing Education Reform* and *Schools Engaged in Education Reform*, a phase 3 report with vignettes from reforming schools, are also available at no cost.

The study's issue briefs are also available online and may be downloaded free. For links to publications from all phases of the study, visit AEL's Web site at http://www.ael.org/national.htm.

Contact Jane Hange (hangej@ael.org, 800-624-9120) to request print copies or more information.

150

From the Kentucky Institute for Education Research (KIER)

2000 Review of Research on the Kentucky Education Reform Act by the University of Kentucky/University of Louisville Joint Center for the Study of Educational Policy (2000)

Ten years after the passage of the Kentucky Education Reform Act (KERA), this review of research is the fifth such report produced for KIER. It seeks to answer the question *Is KERA working?* and focuses on the effects of implementation and their implications on future policy and practice.

Editors Joseph M. Petrosko and Jane Clark Lindle have incorporated pieces on assessment and accountability, the primary program, family resource and youth services centers, school-based decision making, and other components of KERA. The high school restructuring section includes information from principals of developmental sites, where elements of that component were implemented to various degrees. The principals discussed their experiences as follows.

What are some decisions and/or changes we've made?

- moving to block scheduling
- adding the High Schools That Work program
- establishing an advisor/advisee porogram
- increasing the emphasis on technology
- requiring culminating projects
- instituting a rigorous core curriculum
- establishing the Tech-Prep Program
- promoting curriculum redesign
- increasing community participation
- increasing the emphasis on professional development

How did we make these decisions?

Most schools worked through a committee system in which committees took recommendations to the faculty and then to the school council. The School-Based Decision-Making process thus played a major role in restructuring the schools.

What information did we use to document our needs?

Kentucky Instructional Results Information System (KIRIS) results were the driving force behind many of the decisions. Surveys were conducted with students and parents to gauge restructuring efforts. Needs assessments associated with the consolidated planning process played a role in many schools.

What lessons have we learned that would help others in similar efforts?

- Faculty buy-in is key to the success and implementation of any program or change.
- Professional development is crucial, especially with a change to block scheduling.
- Willingness to try new things is important. A fear of failure is not effective.
- Public engagement is crucial prior to implementation.
- Multiple site visits should be conducted prior to moving in a new direction.
- The restructuring effort should always be student focused.
- Advisor/advisee programs are essential for completion of core components.
- Leadership and vision are key to success.
- Instructional leaders must be patient.
- Too many changes should not be attempted at one time.
- All stakeholders must be kept informed.
- Restructuring must be organized. The Consolidated Planning process is the best avenue to accomplish this.
- A working relationship should be developed with feeder schools.

The report is available free online at http://www.kier.org/2000Research.html or in print from the Kentucky Institute for Education Research, University of Kentucky, 101 Taylor Education Building, Lexington, KY 40506-0001. Send e-mail requests to sjack2@pop.uky.edu or phone 859-257-9789.

151 (continued on page 11)

Visit classrooms where technology is being effectively used. Get more lesson ideas—and submit your own—at the companion Web site. Visit http://www.ael.org/snapshot.

Publications of Interest

Beliefs that Drive Successful Schools

ASCD research on developing potential solutions to closing America's achievement gap shows that schools that succeed at educating everybody's children believe that all children can learn.

A new video series called *Educating Everybody's Children* takes viewers to schools where educators embrace diversity and have positive attitudes and beliefs. The three-tape series shows how teachers set high expectations for learning, respond to the cultural differences of students, and create classroom environments that serve students' diverse learning styles. Interviews with teachers explain the reasons to use different strategies. An accompanying facilitator's guide helps users create effective workshops for new and experienced teachers in every grade level. Each tape addresses a different topic: Tape 1: Attitudes and Beliefs: Overview; Tape 2: Capitalizing on Students' Strengths; Tape 3: Matching Instructional Methods to Students' Instructional Needs.

The set costs $410 for members, $520 for nonmembers. To order, or to see a sample clip from the video series, go to http://shop.ascd.org and select the Video tab.

ISTE Publication Helps Bridge the "Digital Divide"

Learning & Leading with Technology (L&L), an International Society for Technology in Education (ISTE) publication, has released a special issue focused on the "digital divide" (the social distance between technology "haves" and "have-nots"). The special issue builds on ISTE's efforts in other forums and emphasizes the society's commitment to resolving inequalities in technology access and literacy. Featured articles document programs for migrant and ESL students and offer practical teaching strategies for all K-12 classrooms.

L&L is a resource for educators interested in research and policy, as well as for classroom teachers. The magazine may be purchased online at http://www.iste.org/bookstore or by calling 800-336-5191.

New Math and Science Resource

A new site focused on the needs and interests of those involved in professional development for math and science teachers recently arrived on the Web. TE-MAT (http://www.te-mat.org) provides access to carefully selected materials.

In addition to the database of materials, the site provides a conceptual framework for professional development, a section of essays, and information about the site in a question-and-answer format.

The site was developed by the Teacher Education Materials Project and funded by a grant from the National Science Foundation. The Eisenhower National Clearinghouse was involved in constructing the site and will maintain it when the project is completed. The National Center for Improving Science Education also contributed to the project.

In the remaining year of the project, TE-MAT staff will continue to identify, review, and enter materials. Site users are invited to recommend materials for review.

Advice for Students Cyberseries

Online advice on some of the problems teens face—such as low self-esteem, perfectionism, competition, and stress—is available through a free cyberseries called *Click*, in which fictional teens deal with real-life situations. *Click* is part of the Life's Playbook Program created by members of the Verizon Academic All-America Hall of Fame®, former scholar-athletes who have also excelled in their professional lives.

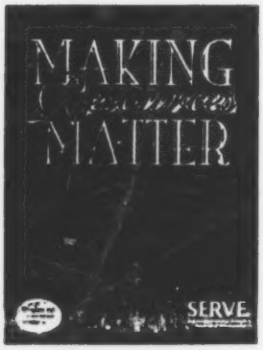
(continued on page 7)

152

New Resources from AEL

Making Resources Matter

A Systematic Approach to Developing the Local Consolidated Plan



This series guides school districts as they develop a consolidated plan for programs and resources. The 10 modules address all components of the planning process and offer sugestions for developing a plan to use resources effectively.

The modules reinforce themes of the 1994 Improving America's Schools Act—data-based decision making, aligned school reform elements, research-based programs and strategies, effective use of resources through consolidation, involvement of all stakeholders, and ongoing evaluation and revision for continuous improvement.

Each module includes information, examples, worksheets, and checklists to assist teams in a step-by-step approach to planning. Technical assistance providers, state department of education staff, or district staff may use these as a basis for workshops to train planning teams. Teams may use the modules to work independently.

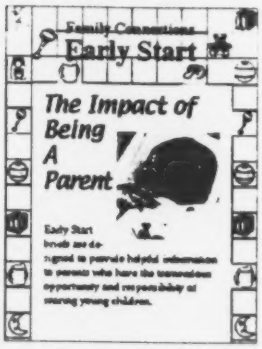
Although the series provides a comprehensive approach to planning, each module may be used as a stand-alone guide for the particular topic it addresses. District teams will find this to be a flexible tool that can be customized to fit local needs.

Module topics include

- Creating Vision and Mission Statements
- Conducting a Comprehensive Needs Assessment
- Planning Professional Development
- Budgeting the Plan

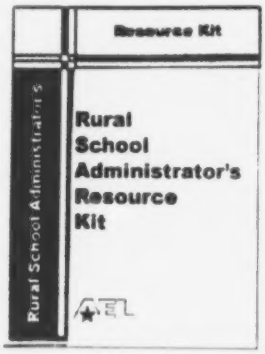
Making Resources Matter was developed by the Region IV Comprehensive Center at AEL. It can help districts prioritize tasks and focus efforts to ensure that they get high-quality plans to guide educational efforts toward high student achievement.

Family Connections Early Start



This series of 10 four-page briefs contains useful, easy-to-read information for families with infants and toddlers. The full-color briefs draw on the latest brain research and child development information from experts with experience in research and practice. Topics discussed include an introduction to babies, choosing and using child care, nutrition, language development, first toys, and more. Briefs are designed to be disseminated individually or as sets by early childhood or medical program providers.

Rural School Administrators' Resource Kit



This kit includes the *2001 Rural Education Directory: Organizations and Resources*, a joint publication of the ERIC Clearinghouse on Rural Education and Small Schools, The Rural Education Specialty at AEL, and the National Rural Education Association. It also contains the following tools: (1) Assessing Parent Involvement: A Checklist for Rural Schools, (2) Community Asset Mapping, (3) Community Engagement: An Inventory, (4) Creating Safer Rural Schools: Involving the Community, and (5) Rural School Facilities Planning Process: A Checklist. Both print and online versions of the directory and tools are available.

See inside for ordering information.

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Resources Available from AEL

Some documents can be downloaded from our Web site (http://www.ael.org). Look for this symbol: Ⓦ

___ A Guide to Gender Fair Education in Science and Mathematics (1998) Ⓦ

This publication presents information gathered from hundreds of teachers and researchers in the field of education equity. Highlighted are examples of programs supported by the U.S. Department of Education and National Science Foundation, as well as states, counties, and cities. It includes an annotated bibliography. $15; 40 pp.

___ A Teacher's Guide to Project-Based Learning (2000)

Introduces the ideas and methods that underpin project-based learning. Includes profiles for 13 types of projects, a step-by-step planning guide, an annotated list of references, and more. $16; 98 pp.

At a Glance: ADHD and IDEA 1997 (2000) Ⓦ

This issue of *Policy Briefs* offers an overview of federal requirements as well as information specific to the AEL region. It and the monograph from which it was excerpted, *ADHD and School Law*, are available only on our Web site. Free. http://www.ael.org/rel/policy/adhd2000.htm.

___ Briefs for Parents Ⓦ

These sets of six articles are ready to cut and paste into your newsletter, newspaper, or periodical. Each addresses a child development or education topic of concern to parents. They are available free (limit one copy of each set per order). Check the set(s) you wish to receive.

___ Brief articles for a general audience of parents (English only)

___ Spanish language brief articles for parents (with English translations) 1999 edition. http://www.ael.org/eric/parents.htm.

___ Charter Schools: The Perspective from AEL's Region (1999) Ⓦ

This issue of *Policy Briefs* discusses the status of charter school legislation in Kentucky, Tennessee, Virginia, and West Virginia; regional concerns for policymakers; and effects of federal criteria on funding. $2; 8 pp. http://www.ael.org/rel/policy/charter.htm.

___ Creating Safe Rural Schools (1999)

In this videotape, educators who have designed and implemented safety programs at the state, district, and school levels suggest ways to create safe rural school settings. $15; 58 minutes.

Curriculum Mapping and Design Tool (2000)

A Web-based tool that helps teachers and administrators create and align curriculum to standards, collaborate and share materials, and map semester and/or yearly lesson plans. One-time set-up fee and annual subscription prices are based on school enrollment—call 800-624-9120 for information or to arrange an online demo.

___ Curriculum Snapshots (2000) Ⓦ

This publication provides glimpses into the classrooms of real teachers to illustrate appropriate and creative uses of technology at all grade levels and within different subject areas. $10; 108 pp. Access to the companion Web site (http://www.ael.org/snapshot) and downloadable documents is free. The Web site offers a searchable database of lesson ideas and information on how to submit your own.

___ Dissolving the Boundaries: Planning for Curriculum Integration in Middle and Secondary Schools (1999 revision)

This publication helps secondary school faculties prepare for curriculum integration through a four-step process. The recent revision integrates technology use into the curriculum units. Book with 78-page facilitator's guide, $31; single or additional copies of book, $16; 83 pp.

___ Distance-Based and Distributed Learning (2000)

As more school districts and education institutions explore distance-based learning, they need to know what to think about as they design or acquire courses. This easy-to-use decision tree can help. $2.

Educational Software Use: The 2000 Report (2000) Ⓦ

This survey of teachers in the region looked at technology training, beliefs about the importance of software use, barriers to software use in the classroom, software selection practices, and more. Go to http://www.ael.org/rtec/survey.htm.

___ Elementary Change: Moving Toward Systemic Reform in Rural Kentucky (2000)

This book captures the results of AEL's 10-year, qualitative study of systemic school reform in four rural Kentucky districts. It presents findings and recommendations to help educators and policymakers keep KERA on track. $20; 244 pp. (ISBN 1-891677-09-8)

___ Family Connections Early Start (2001)

This series of 10 four-page briefs contains useful information in an easy-to-read format. Designed for families with children ages zero to three, the full-color briefs address such topics as nutrition, first toys, language development, and more. Sample set of 10 briefs: $3. Package of 20 sets (10 briefs per set): $24.95.

___ Family Connections Parent Notebook

The *Family Connections* learning guides are now in a notebook for parents and available in three volumes: *Family Connections 1* is for families of preschool children, *Relaciones Familiares 1* is the Spanish-language version, and *Family Connections 2* is for parents with kindergarten children. Each notebook contains a set of 30 four-page guides, plus tips for using them. $14.95 each ($11.95 without 3-ring binder).

___ Graphing Calculators in Mathematics Grades 7-12 Ⓦ

This resource guide offers lessons covering a wide variety of mathematical concepts and topics. Planned for teachers with no experience with graphing calculators and for those who have used the instruments since inception, these lessons emphasize hands-on problem-solving approaches, with connections to science and the real world. $39; 250 pp. http://www.ael.org/calculators.

___ Improving Rural School Facilities: Design, Construction, Finance, and Public Support (2000)

While the condition of rural school facilities varies across the country, most rural school districts face similar issues. In this book, editors Sarah Dewees and Patricia Cahape Hammer present discussions of these issues from several perspectives. $18; 132 pp. (ISBN 1-891677-05-5)

___ In Accord with Nature (1999)

This book demonstrates how educators and youth leaders can help middle and high school students understand and define their relationship to nature. Alternative teaching strategies and structured activities connect students with the natural and the built worlds. $19; 192 pp. (ISBN 1-880785-20-X)

___ Inside School Improvement: Creating High-Performing Learning Communities (2000)

Researchers, teachers, principals, parents, and students collaborated on this book. Their stories, reflections, and discussions of theory provide inspiration as well as food for thought and dialogue. Included are practical tools, activities, and resources to use right away. $35; 328 pp. (ISBN 1-891677-10-1)

___ K-8 Building Blocks for Algebra (1998)

Recent brain research supports what teachers have long observed: students learn by fitting new information with what they already know. This publication provides activities that bring the real world into the classroom and help children make sense of the relationships between numbers. $18; 108 pp.

___ Making Resources Matter: A Systematic Approach to Developing the Local Consolidated Plan (2000)

This series guides school districts as they develop a consolidated plan for programs and resources. The 10 modules address all components of the planning process and offer sugestions for developing a plan to use resources effectively. Boxed set: $25.

___ Next Steps: Research and Practice to Advance Indian Education (1999)

Editors asked a dozen indigenous scholars and practitioners to help answer such questions as What is "Indian education" today? and How will it look in the future? The essays they received help readers explore the issues that face educators who work with indigenous students. $28; 317 pp. (ISBN 1-880785-21-8)

___ Notes from the Field: Evolution of the Primary Program in Six Kentucky Schools. Vol. 6, No. 1 (1998) Ⓦ

In this issue, researchers examine the development of the primary program in six rural Kentucky elementary schools. The most detailed description comes from 1996-97, when researchers narrowed the focus of their work to the class of 2006. $2; 12 pp. plus 8-page supplement. http://www.ael.org/pnp/notes.

Notes from the Field: KERA in the Classroom. Vol. 7, No. 1 (2000) Ⓦ

In this issue, researchers present findings and recommendations based on analysis of data gathered during AEL's 10-year study of four school districts. http://www.ael.org/rel/policy/note2000.htm.

___ Patterns of Promise (2000)

This book describes exemplary uses of technology at 12 schools. Large and small, well-to-do and low income, urban and rural—these schools all take creative and innovative approaches to using technology and finding funding. $15; 116 pp. (ISBN 1-891677-07-1)

___ Principal Connections (2000)

This CD-ROM can help school leaders examine their roles as technology leaders, identify barriers to technology integration, learn strategies to help teachers accept technology, and more. $10. The companion Web site supplements and updates the CD-ROM and links to sites of interest to technology leaders (http://www.principalconnections.org).

___ Reaching Out: Best Practices for Educating Mexican-Origin Children and Youth (1999)

Harriet Romo of the University of Texas at Austin describes successful approaches to improving outcomes for this growing population of U.S. students. $24; 232 pp. (ISBN 1-880785-22-6)

___ Recruiting and Training Volunteer Tutors of Emergent and Beginning Readers (1998)

This manual identifies characteristics of effective tutoring programs; suggests ways to recruit tutors and select the students they'll work with; presents a model for conducting tutor training sessions; and provides activities tutors can use to help readers with comprehension, word study, and writing activities.

___ Trainer's package (90-minute video, 64-page manual, and 15 activity cards). $225.

___ Tutor's package (64-page manual and 15 activity cards). $30.

___ Rural School Administrators' Resource Kit (2001) Ⓦ

The kit includes the *2001 Rural Education Directory: Organizations and Resources*. It also contains the following tools: (1) Assessing Parent Involvement: A Checklist, (2) Community Asset Mapping, (3) Community Engagement: An Inventory, (4) Creating Safer Rural Schools: Involving the Community, and (5) Rural School Facilities Planning Process. The directory is free online at http://www.ael.org/eric/ruraled. The tools are at http://www.ael.org/rel/rural/abstract/toolkit.htm. Print copy: $20, approx. 90 pp.

___ School-Based Programs to Promote Safety and Civility (1998) Ⓦ

This issue of *Policy Briefs* focuses on more than 20 primary and secondary level antiviolence programs, all of which get a thumbs-up from researchers. Complete contact information is provided for each program. $2; 12 pp. http://www.ael.org/rel/policy/schbas.htm.

___ Schools for Disruptive Students: A Questionable Alternative? (1998) Ⓦ

Recent legislation and commitments to provide safe learning environments have prompted states to create alternative schools for disruptive students. This issue of *Policy Briefs* reviews research and suggests indicators for judging the effectiveness of alternative school legislation. $2; 8 pp. http://www.ael.org/rel/policy/disrstd.htm.

___ Small High Schools that Flourish: Rural Context, Case Studies, and Resources (2000)

This book discusses small rural high schools in the United States and why we should care about them. It then takes a closer look at four particular schools located in communities of very modest means. Edited by Craig B. Howley and Hobart L. Harmon. $20; 200 pp. (ISBN 1-891677-06-3)

___ Standards Implementation Indicators: Charting Your Course to High Achievement (2000)

An easy-to-use tool to help school leaders look at their progress toward standards-based instruction. Includes six indicators, a profile chart, and a planning form. $14.95.

___ The ABC's of Parent Involvement (1998)

This book offers information, inspiration, ideas, and expert advice to parents with children of all ages. AEL's Family Connections staff contributed early childhood knowledge. 134 pp. Single copies are $3, and a box of 50 costs $70 east of the Mississippi or $75 west of the Mississippi, shipping included.

___ UnCommon Knowledge: "The Voices of Girls" Documentary (2000)

Girls from one of the poorest rural counties in the United States surprised their families, teachers, and even themselves on a three-year exploration of the science and mathematics of everyday life. See the powerful impact of the Voices of Girls project, funded by the National Science Foundation and operated by AEL. Videotape, $15; 57 minutes.

UnCommon Knowledge: Guides for Hands-on Science and Math (2000) Ⓦ

Volume One includes activities on the science of folk medicine and natural dyes, the science of nutrition, and the science of food preservation. Volume Two contains the mathematics of quilting and making art through mathematics. The guides are free and available only from the ERIC pages of AEL's Web site at http://www.ael.org/eric/voices.

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Publications of Interest

(continued from page 6)

Each episode of the 20-week series combines text, photography, weekly cliff-hanger endings, and interactivity.

Story-specific educational vignettes, accessible through hyperlinks in the text, give students extra information about topics ranging from grammar and vocabulary to decision making and reading comprehension.

In order to provide access for a wide range of users, *Click* is not streaming video and does not involve MP3 audio. Find *Click* at http://www.lifesplaybook.com/click.

Every Child a Reader

This innovative series of six-page pamphlets summarizes the state of current research in reading education for teachers and teacher educators. From the Center for the Improvement of Early Reading Achievement (CIERA), this series presents research-based knowledge from a wide variety of sources. It includes effective, research-based strategies to implement in any classroom.

Printed copies of the overview and eight topics in a self-closing folder cost $10 and can be ordered by fax at 734-763-1229 or by mail from CIERA, University of Michigan School of Education, 610 E. University Ave., Room 1600 SEB, Ann Arbor, MI 48109-1259. The complete series can be downloaded free from the CIERA Web site at http://www.ciera.org/ciera/every-child-a-reader/getting.

Captioned Media Program

For teachers with students who are deaf or hard-of-hearing, this program offers help. It provides free-loan, open-captioned videos from a collection of more than 4,000 titles including classic movies, educational videos, and special-interest videos. Open-captioned videos, like subtitles, provide the viewer all

(continued on page 10)

New Emphasis on Reading

Recently, First Lady Laura Bush announced plans to focus America's attention on recruiting the best and brightest to the teaching profession and ensuring that all young children are ready to read and learn when they enter the classroom.

Mrs. Bush's initiatives appear in *Ready to Read, Ready to Learn*, which is available online at http://www.ed.gov/rrrl/inits.html. A new guide for parents appears below and online at http://www.ed.gov/inits/rrrl/guide.html.

A Guide for Parents:
How Do I Know a Good Early Reading Program When I See One?

- Every teacher is excited about reading and promotes the value and fun of reading to students.
- All students are carefully evaluated, beginning in kindergarten, to see what they know and what they need to become good readers.
- Reading instruction and practice lasts 90 minutes or more a day in first, second, and third grades and 60 minutes a day in kindergarten.
- All students in first, second, and third grades who are behind in reading get special instruction and practice. These students receive, throughout the day, a total of 60 extra minutes of instruction.
- Before- or after-school help is given to all students beyond first grade who need extra instruction or who need to review skills. Summer school is available for students who are behind at the end of the year.
- Reading instruction and practice include work on letters, sounds, and blending sounds. Students learn to blend letters and sounds to form new words.
- Learning new words and their meanings is an important part of instruction.
- Students have daily spelling practice and weekly spelling tests.
- The connection between reading and writing is taught on a daily basis. Students write daily. Papers are corrected and returned to the students. By the end of second grade, students write final copies of corrected papers. Corrected papers are sent home for parents to see.
- All students are read to each day from different kinds of books. Students discuss what they read with teachers and other students.
- All students have a chance to read both silently and aloud in school each day and at home every night.
- Every classroom has a library of books that children want to read. This includes easy books and books that are more difficult.
- The school library is used often and has many books. Students may check books out during the summer and over holidays.

Grant Opportunities

President's Student Service Awards

Every student from kindergarten through college who contributes at least 100 hours (50 hours for younger students) of service to the community is eligible for this award. The award consists of a lapel pin and a certificate and letter signed by the President.

President's Student Service Scholarships

Through this program, each high school in the country may select two students to receive $1,000 in recognition of outstanding service to their community.

For more information, go to http://www.nationalservice.org or phone toll-free 866-550-PSSA.

Federal Programs

Department of Housing and Urban Development: Youthbuild Grants

Purpose: To combat both high drop-out rates and the shortage of housing for low-income families.

Grants are designed to teach low-income students leadership skills and provide construction skills to improve their employability and prospects for self-sufficiency. Projects should provide education, job training, counseling, and employment and leadership development services to low-income, high school dropouts ages 16 to 24.

Three funding categories will award grants of up to $400,000 or $500,000; one category is designated specifically to rural and underserved areas.

Deadline: May 30, 2001

Application and information available online at http://www.hud.gov or by phone at 800-HUD-8929.

National Science Foundation: Connections to the Internet

Purpose: To support highly innovative and replicable projects for Internet network connections designed to link educational facilities and provide educators, researchers, and students with the Internet capabilities necessary to succeed.

K-12 will receive up to $15,000 for each of two years; higher education institutions will be awarded up to $20,000. Usually a dollar-for-dollar match is required.

Deadline: July 31, 2001

Application and information available from Division of Advanced Networking Infrastructure and Research, NSF, 4201 Wilson Blvd., Room 1175, Arlington, VA 22230; phone 703-306-1949.

Foundations

Delta Foundation: Youth Leadership Development and Youth Wellness Grants

Purpose: To enhance the quality of life in communities served by Delta Air Lines through programs that address one of two focus areas.

Youth Leadership Development supports programs that help young people develop strong character, leadership skills, positive personal development, conflict resolution, team building, and other skills for leadership in a global community.

Youth Wellness supports programs that promote the physical and/or mental health of youth (ages 18 and below).

Deadline: Open

Application and information available online at http://www.delta.com/inside/community/Resources/foundation_guide/index.jsp or from Delta Air Lines Community Affairs, Department 979, P.O. Box 20706, Atlanta, GA 30320-6001.

American Honda Foundation

Purpose: To support youth education projects that include a focus on job training, math, science, or environmental education.

Eligible applicants include K-12 schools and districts, nonprofit scientific and education organizations, and national programs that encourage innovative education methods and techniques.

Deadlines: Quarterly, with next dates being August 1 and November 1

For guidelines, visit http://www.hondacorporate.com/community/index.html?subsection=foundation or send an SASE to American Honda Foundation, P.O. Box 2205, Torrance, CA 90509. Contact Kathy Carey, 310-781-4090.

Wallace-Reader's Digest Funds: Ventures in Leadership

Purpose: To support innovative ideas in education leadership from a wide range of communities, especially those in low-income neighborhoods.

These fast-track grants aim to encourage experimentation in strengthening the prepartion of school leaders and mproving the conditions under which they run their schools. Awards for programs up to two years in length range from $5,000 to $50,000.

Deadline: Open, with awards made monthly
Applicaton and information available at http://www.wallacefunds.org/programs/ventures.cfm. Applications must be submitted electronically.

The J.C. Downing Foundation

Purpose: To support innovative efforts and original projects that offer far-reaching gains and widespread results.

Areas of support include education and human development, fine arts, sports and athletics, and technology and communications. Awards range from $5,000 to $50,000.
Deadline: Open
Application and information available online at http://www.jcdowning.org/funding/grantmaking.htm.

Other

The Dirksen Congressional Center: Robert H. Michel Civic Education Grants

Purpose: To help teachers, curriculum developers, and others improve the quality of civics instruction, with priority on the role of Congress in our federal government.

Areas of interest include designing lesson plans, creating student activities, and applying instructional technology in the classroom. Teachers (grades 4-12) and postsecondary faculty are eligible, as are teacher-led student teams and individuals who develop curriculum. Priority will be given to the disciplines of history, government, social studies, political science, and education. Past grant awards have ranged from $100 to $5,500.
Deadline: October 1, 2001
Application and information available online at http://www.pekin.net/dirksen/grantmichelciviced.htm.

National Weather Association: Sol Hirsch Education Fund Grants

Purpose: To help K-12 teachers improve the education of their students in meteorology.

Grant monies may be used to take an accredited course in atmospheric sciences, attend a relevant workshop or conference, or purchase scientific materials or equipment for the classroom.
Deadline: August 1, 2001
Application and information available online at http://www.nwas.org/solhirsch.html or by mail from NWA Education Committee, 3809 Clarks Lane, Suite 007, Baltimore, MD 21215.

National Semiconductor and 21st Century Teachers Network: Internet Innovator Awards

Purpose: To recognize and reward teachers who take full advantage of the Internet as a resource to enhance student learning.

Applicants must be K-12 classroom or resource teachers may apply in groups of up to three. Projects described in applications must be completed or currently in implementation and have demonstrated success.

Three awards will be made—one each to an elementary, a middle, and a high school. Teacher winners will receive $10,000 and the schools they represent will receive $15,000.
Deadline: June 22, 2001
Application and information available at http://www.nsawards.com/us/index.html.

The Christensen Fund

Purpose: To support programs in public and independent schools, museums, and other nonprofit institutions related to activities in the visual arts and conservation.

The Fund has provided grants for such projects as support for high school computer graphics courses and renovation of a high school art studio. It has also funded primary school arts education in conjunction with a major urban museum and with an art school.

Proposals requesting substantial funding are generally developed in collaboration with the Fund; projects of more limited scale are also funded on a regular basis.
Deadline: Open; submit a single-page abstract of your proposal first.
Application and information available online at http://www.christensenfund.org.

The Educational Foundation of America

Areas of interest include the environment, arts, education, and human services.
Deadline: Open
Due to the volume of requests, applicants are required to send a letter of inquiry (no more than two sides of one sheet of paper) as the first step.

Contact Diane M. Allison, Executive Director, The Educational Foundation of America, 35 Church Lane, Westport, CT 06880-3515, phone 203-226-6498, e-mail: efa@efaw.org. More information available at http://www.efaw.org.

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Publications of Interest

(continued from page 7)

Curriculum + Standards = Confusion?

AEL's Web-based Curriculum Mapping and Design Tool helps teachers and administrators create and align curriculum to standards.

the information contained in the audio track.

The Captioned Media Program invites parents and teachers of deaf children to set up free accounts to check out videos online. Educational videos have lesson guides that teachers can use in the classroom, where open-captioned videos may enhance the literacy value to all students, even if only one child has a hearing loss.

The program is funded by the U.S. Department of Education and administered by the National Association of the Deaf. To learn more, visit http://www.cfv.org.

Unlocking CSRD Components

The Comprehensive School Reform Demonstration program funded by the U.S. Department of Education requires that participating schools develop and implement school improvement plans with the following nine components: goals, supportive staff members, research-based methods, external assistance, parent and community involvement, staff development, coordination of resources, evaluation, and comprehensive approach.

Unlocking the 9 Components of CSRD, by the National Clearinghouse for Comprehensive School Reform, provides dozens of online resources on these components to help educators create effective schoolwide improvement plans. A guide is available at http://www.goodschools.gwu.edu/PUBS/CSRD9.pdf. For a free print copy, contact the Clearinghouse at 877-766-4277 or AskNCCSR@goodschools.gwu.edu.

Standards for English as a Second Language

As the number of students from non-English-speaking backgrounds increases, schools in the United States now have guidance on setting expectations for these students' command of English and for their overall academic achievement. Teachers of English to Speakers of Other Languages (TESOL) has developed a set of standards for Pre-K-12 students and a companion parent guide, and is developing standards for ESL teacher education.

Visit the Web (http://www.tesol.org) for links to the student standards, an electronic discussion list, and other information and publications.

Education Data Resource

The Education Trust works to distill education data to make patterns clear and understandable. It has focused especially on achievement gaps separating low-income and minority students from other young Americans and on what schools can do to close those gaps.

Trust data summaries might be used by school leaders to help kick off discussions of strategies to raise student achievement, by parent and community groups as guidance in collecting and understanding local data, and by policymakers and journalists.

These titles are presently available:

• *Achievement in America 2000.* This presentation shows achievement patterns among students from different racial and economic groups. It documents critical differences in the way schools educate students and concludes with examples from states and school systems that are attacking those differences and getting results.

• *Dispelling the Myth: High Poverty Schools Exceeding Expectations.* In 1998, the Education Trust and the Council of Chief State Schools Officers collaborated to identify high-poverty schools that were among either the highest performing or biggest gaining schools in their states.

The summaries are available online at http://www.edtrust.org. Simply click on the data button in the left column of the home page. Text and PowerPoint presentations can be downloaded for free or purchased on CD-ROM.

Research Notes

(continued from page 5)

From the Education Trust

Creating an Appetite for Change: Leaders' Perspectives on Promoting K-16 Reform Through Community Collaboration by Policy Studies Associates, Inc. (2000)

From 1991 through 1999, The Pew Charitable Trusts supported the Community Compacts for Student Success initiative. With technical support from the Education Trust, the initiative included three education collaborations—El Paso, Texas; Pueblo, Colorado; and Philadelphia, Pennsylvania.

The purpose of the initiative was to improve the educational performance of all students, particularly those held back by poverty and race, through systematic, large-scale improvement efforts guided by coalitions of local leaders from education, business, and the community. The initiative emphasized involving higher education.

This report draws from a facilitated discussion among the directors of the three Community Compacts after eight years of working together. It presents "lessons learned," grouping them into such topic areas as motivation to collaborate, involving higher education, organizational issues in promoting collaboration, measuring success, taking K-16 improvement and integration to scale, and advice to others.

For example, measuring success was described by one director as "constantly looking for evidence of change, [not just] in test scores but also in the way the schools look and feel." Another described a breakthrough moment as "when I realized that educators were finally welcoming the availability of accurate data on student progress."

Discussions around taking improvement to scale mentioned that "policies are never enough. Policies must be tightly linked to the practices that support them in order to make a difference." One director mentioned a school quality review that "focuses on the school's capacity and commitment to support all students in achieving high standards. The school system says that it lacks the resources to conduct the review for all schools, however. This is a good example of the type of problem that prevents us from moving to scale with high standards and first-rate instruction for all children."

"Policies must be tightly linked to the practices that support them in order to make a difference."

Advice for others addressed several areas. To community collaborations that are just forming, they suggested that "change agents need to hit the ground running. The public constituency for a major reform, such as K-16 collaboration, needs to know that a particular proposed effort is going to deliver quickly." And they worried about sustaining change. "A continuing problem . . . is the pall cast by the entrenched methods of every school system's central office. New superintendents typically come in and want to clear out the central office, but, more often than not, they end up replacing one set of bureaucrats with another."

When asked what they would do differently if they could start over, one director explained that the Community Compact "devoted major attention to CEOs and to teachers. Given the chance to make some changes, I would give the same attention to principals, department heads, and guidance counselors."

The complete report is available free at http://www.edtrust.org.

A follow-up survey of teachers in the AEL region on technology training, beliefs about the importance of software use, and more. Go to http://www.ael.org/rtec/survey.htm.

The Community Compact "devoted major attention to CEOs and to teachers. Given the chance to make some changes, I would give the same attention to principals, department heads, and guidance counselors."

The Internet and Learning

"The power of the Internet to transform the educational experience is awe-inspiring, but it is also fraught with risk." So states the foreword of *The Power of the Internet for Learning: Moving from Promise to Practice*, the recently published report of the Web-Based Education Commission established by Congress.

Over the course of a year, commission members "heard from hundreds of educators, policymakers, Internet pioneers, education rsearchers, and ordinary citizens." What they learned demonstrated the promise of the Internet to center learning around the student instead of the classroom, to focus on the strengths and needs of individual learners, and to make lifelong learning a practical reality.

To move from promise to practice, the commission calls for a national mobilization similar to those that occurred around the race to the moon and finding a cure for polio. It urges governments, the education community, the private sector, and parents to invest time, energy, and money in helping to develop and shape the e-learning agenda.

The commission's recommendations include the following:

- Make powerful new Internet resources, especially broadband access, widely and equitably available and affordable for all learners.
- Provide continuous and relevant training and support for educators and administrators at all levels.
- Build a new research framework of how people learn in the Internet age.

The report is available online at http://www.ed.gov/offices/AC/WBEC/FinalReport. Print copies are available from the U.S. Department of Education's publication service. Phone 877-4-ED-PUBS or send e-mail to edpubs@inet.ed.gov.

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162

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THE LINK

A PUBLICATION FOR EDUCATION PRACTITIONERS

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Looking for "Doors" to Change

A Synopsis of Recent School Improvement Research and Actions

By Dean Fink

Across the western world, many educational jurisdictions have identified school improvement as a policy priority.[1] Motivated by the desire to be competitive in the global marketplace, governments have looked to education research for guidance.

In the past 20 years there has been a plethora of research on educational change. *School effectiveness* research, for example, originated in the early 1980s with the work of Ron Edmonds, who identified the correlates of effective schools—the *what* of change.[2,3,4] Most projects based on this research disappeared quickly because the findings said little about *how* to effect change.

A concurrent stream, *school improvement* research, attempted to answer this *how* question.[5,6] The immediate impacts of this work were the adoption of school improvement plans and site-based management as strategies for school improvement.[7,8]

In many places school improvement efforts evolved into managerial approaches that left the essential "grammar of schooling" largely untouched.[9] (Just as language has a grammar that gives it a structure, an organization has a "grammar" that perpetuates its practices. In the case of a school, the traditional grammar might include grades, subjects, timetables, and a hierarchical management structure of principal, assistant(s), department heads, and then teachers.) To change this grammar, many jurisdictions adopted *restructuring strategies* that included more challenging curricula, increased and varied accountability procedures for students and teachers, mandatory upgrading of teacher and principal qualifications, and direct intervention by central

(continued on page 2)

IN THIS ISSUE

This issue of The Link *focuses on helping schools open their doors to change. It reviews recent school change efforts, reports advice from international researchers and state-level practitioners, and provides information about resources to help schools understand and apply research-based information to their improvement efforts.*

Announcements
Improving America's Schools Conference; p. 3

Improvement Resources from AEL
Inside School Improvement; Standards Implementation Indicators; Family Connections Early Start; Curriculum Creator; TransFormation, order form/insert

Grant Opportunities
Federal and More, p. 9

Publications of Interest
Data for Policymaking; Building a Learning Community Culture; Enlisting Students in School Improvement; Redefining the Teacher as Leader; ENC Focus on Standards; The Promise of Urban Education; Accountability Tools; Innovations for Better Teaching; Making Teaching Better, p. 10

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163

Looking for "Doors" to Change

(continued from page 1)

agencies in schools deemed to be underperforming.

These and similar top-down strategies have proven popular among policymakers in many nations. Richard Elmore offers three reasons for this wide acceptance:

- structures are visible and malleable, changing them symbolizes that the reformers are serious
- it is easier to change structures than other aspects of schooling
- structural changes can remove barriers to learning for students and encourage alternative approaches to teaching[10]

The international evidence suggests that restructuring alone makes little long-term difference to teaching, learning and caring in classrooms.

Elmore's studies on restructuring reveal that the relationship of structure to teaching practice is mediated by "relatively powerful forces such as the shared norms, knowledge and skills of teachers." Increasingly, researchers and practitioners are looking at these nonstructural aspects of schooling for "doors" to educational change.[11]

Over the past few years the school improvement research literature has moved from emphasizing structures and formal processes such as school improvement planning to focusing on the less tangible and ultimately more significant aspects of schools such as school culture.[12,13,14,15] This shift in focus looks to create a balance between restructuring and what can be described as *reculturing*.[13,16] Michael Fullan defines reculturing as "the process of developing new values, beliefs and norms. For systematic reform it involves building new conceptions about instruction . . . and new forms of professionalism for teachers."[16]

Robert Slavin identifies two types of systemic reform movements.[17] The first, as mentioned previously, was initiated by federal and/or state governments and reflects a deep pessimism that education can reform itself. Most governmental reforms focus heavily on changing structures as a means to change classroom practice. For example, in many jurisdictions this has led to a dramatic increase in the testing of students, prescriptive curriculum and mandated in-service for teachers. The international evidence suggests that restructuring alone makes little long-term difference to teaching, learning and caring in classrooms.[12,13] Implicit in many of these legislated reforms is the notion that the system is irremediably broken and requires either totally new types of schools or the reinvention of traditional schools from the past. This desire to create new settings is reflected in the charter school and school choice movements in North America, and the recreation of selective grammar schools in the United Kingdom.

A second approach to systemic reform attempts to develop "ambitious models for school reform" by "building networks of technical assistance and school-to-school support to serve ever-expanding numbers of schools that freely choose to implement [systemic change] models."[17] Examples include Theodore Sizer's Coalition of Essential Schools,[18] Henry Levin's Accelerated Schools,[19] and the New American Schools network[20] in the United States.[21] The Learning Consortium[6] and the Manitoba School Improvement Project[22] in Canada, the Improving Quality Schools for All project[23] in Britain, and the National Schools Network[24] in Australia also belong in this category.

In these cases, partnerships between researchers and practitioners have worked to change school structures, cultures, and learning conditions. These networks operate on the premise that authentic change is informed by research and involves "doing with" rather than "doing to" teachers and principals. It is in this spirit of networking that AEL convened the colloquium on low-performing schools in June 2001. (See *A Desperately Important Agenda* on page 4.)

Dean Fink consults on educational development around the world. He has taught at all grades from primary to graduate school and worked as a principal and superintendent with the Halton Board of Education in Ontario, Canada.

Looking for "Doors" to Change

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2001 Improving America's Schools Conferences

The U.S. Department of Education's *No Child Left Behind* is coming soon. The eastern region conference, which includes the states in AEL's region, will be October 17-19 in Mobile, AL.

Participants will learn about the latest research and data, receive information about funding opportunities, and gain an understanding of the department's new priorities and initiatives.

Teachers, principals, counselors, parents, grant administrators, and others interested in education are encouraged to attend.

Registration is $260 for individuals or $225 per person for a team of four or more.

To register in advance, phone 800-522-0722, ext. 1022 or visit http://www.ncbe.gwu.edu/iasconferences.

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Recently, AEL became the first education institution in the world to use new Digimarc MediaBridge technology, which employs digital watermarks to instantly link printed materials with the World Wide Web. You can recognize an Internet-enabled page by the symbol you see at the right and in the green bar below.

Most pages of *The Link* contain an image (a star) embedded with a Digimarc. When you hold the star up to a digital camera connected to your desktop computer, the Digimarc MediaBridge software reads the watermark, activates your Web browser, and delivers AEL's Web site to your screen. From there, you will be able to launch related Web sites and access a wealth of information—without typing long URLs.

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"A Desperately Important Agenda"

Researchers and School Leaders Ponder the Dilemma of Change at AEL's Colloquium on Low-Performing Schools

How do external agencies assist low-performing schools? How long does it take to change performance in a low-performing school? What does it take to sustain such change?

These were among the questions researchers from three countries and state officials from Kentucky, Tennessee, Virginia, and West Virginia grappled with during a recent colloquium organized by AEL in collaboration with the International Centre for Educational Change at the Ontario Institute for Studies in Education/University of Toronto (OISE). Participants in the June 4-5, 2001 event worked to improve their understanding of what Andy Hargreaves of OISE described as "a desperately important agenda."

The colloquium provided a rare opportunity for practitioners—state officials who deal with the challenging issues of underperforming schools—and researchers—scholars from the United States, Canada, and England—to share expertise and experiences.

The colloquium was the first of an intended series of events to join theory and practice with a focus on turning around low-performing schools. A major purpose of the colloquium was to lay the groundwork for a research agenda on sustainable school reform within each of the participating states. To do so, participants established a set of learnings about change and underperformance around which there seems to be widespread agreement.

The colloquium provided a rare opportunity for practitioners and researchers to share expertise and experiences.

Participant Profile

Participants in the colloquium reflected the researcher–practitioner partnership. One team represented AEL and OISE, who facilitated and recorded the colloquium. A second group represented the state departments of education and included officials selected because of their oversight role in school improvement. A third group included researchers with expertise in issues such as educational change, school effectiveness, school improvement, diversity, policy analysis, leadership, and certain cultural communities and contexts.

Structure and Agenda

Allen Arnold and Doris Redfield of AEL welcomed participants. Andy Hargreaves and Amanda Datnow of OISE introduced the structure of the session. Hargreaves stated that how a state defines low- and underperforming schools is a central question. Underperformance implies achieving less well; however, achievement and high test scores are not the same thing. He indicated that a real difficulty is that "we don't have really good data about why they [schools] are not performing and we don't have ways to get good data." He therefore challenged participants to examine action research, collaborative research, and other modes of teacher research to arrive at qualitatively valid ways to understand underperformance. He cautioned that such collaborative research depends on building trusting relationships between researchers and school staffs. Sustainability, equity, excellence, and accountability, he indicated, are the key issues to be considered. Datnow called attention to the need to think about the contexts for change in developing policy in different levels in the system.

Over the course of a day and a half, in

166

small and large groups, participants addressed five broad themes. The colloquium proceeded from an initial discussion of each to more focused conversations on possible actions.

Summaries of Discussions and Lessons Learned

Defining low- and high-performing schools. Definitions and ways to measure effectiveness vary widely. Some jurisdictions define an effective school as one in which student test scores are above state or national means or averages. As test scores tend to correlate with the socioeconomic levels of students, participants pointed out that this approach targets schools in poorer areas as underperforming and ignores schools in more affluent areas. An alternative process defines an effective school as one in which students achieve at or above the level one would expect based on the school's student population. In this approach, the key question for determining a good school is *Does it add value?* A good school does not let any student coast; it challenges and motivates them to perform at ever-higher levels.

Participants addressed the relative narrowness of defining underperformance solely by student test scores. Because schools have broad social mandates, states might adopt a more inclusive indicator system that looks at state test scores and other measures such as student portfolios, attendance, dropout rates, and participation in activities. One participant suggested states should "evaluate what they value" to ensure more broadly based ways to assess schools.

Some participants asked if it is possible for schools to perform effectively in underperforming districts, which raised the larger question of the effects of district and state policies and practices. School performance is often tied to contextual factors beyond the school's control. Can it retain teachers? Does it have high principal turnover? Do district policies overwhelm or confuse improvement efforts? Do superintendents come and go with great rapidity?

In England, Scotland, Ireland, and New Zealand, officials deal with the dilemma of assessing school performance by employing an extensive and expensive system of inspectors who visit classrooms, schools, and district offices to compile evidence. Regardless of information-gathering strategy, participants agreed that how a district defines performance has a direct bearing on strategies for improvement.

Strategies for improving low-performing schools. This discussion began by comparing change to transformation. Schools can achieve changes that alter test scores in the short-term but fail to sustain changes in teaching and learning over time. If schools are to improve, then fundamental changes in the "deep structures" appear to be necessary. Schools will need to develop the capacity to transform themselves. Sustainable improvements in student achievement will be those that come from ongoing, deep changes in classroom practices.

Sustainable improvements in student achievement will be those that come from ongoing, deep changes in classroom practices.

This poses the question of what good teaching looks like. Schools and systems need to align and support good practices. To treat teachers as part of the problem is usually a disincentive. There is a need to shift thinking so teachers are viewed as team players and part of the solution.

Transformation usually occurs best when schools themselves examine and use data to understand their conditions and guide their actions. As David Hopkins of the University of Nottingham (England) put it, schools must look at their data and ask "Are we happy? What can we do about it?"

Stage one of a transformation is to understand a school's context. Researchers emphasized that "one size does not fit all." Different contexts suggest different strategies. One typology to illustrate the importance of connecting different strategies for different

(continued on page 6)

An Important Agenda

(continued from page 5)

contexts looks at schools on two dimensions: (1) effectiveness and (2) capacity to initiate, implement, and sustain important changes. This typology describes five types of schools (see box below). Regardless of the school type, participants agreed there must be incentives to encourage schools to risk change.

Understanding these contextual issues makes it possible to tailor improvement strategies to individual school needs. States use a variety of mentoring strategies to support underachieving schools, such as "highly skilled educator" programs that use the concept of the "critical friend" to try to effect changes. Some states have launched major efforts to upgrade the quality of leaders at various levels and some have initiated state takeovers of failing schools.

Building a school's internal capacity to sustain change over time. Short-term policies designed to jolt a school into action tend to wither and die over time. One might use the analogy of an automobile battery that must be recharged periodically. In fact, cars come with generators that recharge the battery as the motor runs. A school with internal capacity has a generator to keep the school "charged." It possesses a *culture of enquiry*. (See the Norms and Culture box on page 7.) Not only does it have the ability to solve problems, it has the equally important capacity to proactively identify problems in its environment and initiate workable solutions.

To achieve this culture of enquiry to sustain improvement, participants advocated the following district- and state-level strategies:

- Accountability procedures must reward improvement. To this end, teacher and principal appraisal systems should use incentives to encourage high-quality teachers and leaders to stay with or move to low-performing schools.
- Systems for building and supporting strong leadership should focus on learning at all levels. They should include a plan for leadership succession and build capacity through change-agent groups (such as highly skilled educators). The role of leaders is critical. Principals need to be empowered and become courageous gatekeepers to prevent overload so staff can focus on three or four high-potential improvement strategies.
- Districts and states should coordinate policies so schools are not overloaded with unconnected and contradictory initiatives. The various bureaucracies need to understand how their diverse and sometimes uncoordinated activities affect schools.
- State departments need to establish and model effective standards of professional development. Professional development at all levels should be ongoing, focused on student learning, reflective, and respectful of teachers' knowledge and experience. It should be about "doing with," not "doing to." It should build avenues for schools to

A Typology of School Change

- A *moving* school is effective and has the capacity to change. The challenge for the staff of a moving school is to maintain its momentum.
- A *cruising* school appears effective because the students do well on external tests but the school lacks the capacity to change and is therefore not adding value. Such schools usually are in more affluent areas. The quality of student achievement masks significant problems in the teaching and learning processes of the school. The challenge of leadership is to get such schools to first recognize there is a problem.
- A *struggling* school has the will and the capacity to change but at the moment is not considered effective. It is often confused with a *sinking* school and prematurely challenged by external agencies. Struggling schools need considerable outside support to build on a genuine desire to improve.
- A *sinking* school is neither effective nor capable of change. It requires radical surgery such as a state takeover.
- A *strolling* school is internally quite uneven because aspects of the school are effective but in total the school is underperforming. Many secondary schools fit this description: Some departments may be excellent, some mediocre, and others quite poor. Change is occurring, but very slowly.

Stoll, Louise and Dean Fink. *Changing Our Schools: Linking School Effectiveness and School Improvement.* Bristol, PA: Taylor Francis, 1996.
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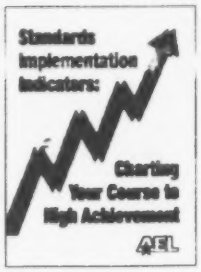
168

Inside School Improvement: Creating High-Performing Learning Communities

This book is specially designed to "feed and nurture" the busy and dedicated people who are striving valiantly to meet demands for improvement and accountability in education. Leaders who want to create high-performing learning communities will find practical tools, activities, and resources that can be put to work right away. Stories, reflections, and discussion of theory provide inspiration as well as food for thought and dialogue.

As you listen to teachers, principals, parents, and students speak honestly about what has worked (or not worked) in their schools, you will gain new perspectives on the importance of the learning culture in your school. You will reconsider the roles of leadership, shared goals, and assessment. By uniting the worlds of education research and practice, *Inside School Improvement* invites you to unleash the best and brightest inside yourself—and inside your school.



Standards Implementation Indicators: Charting Your Course to High Achievement

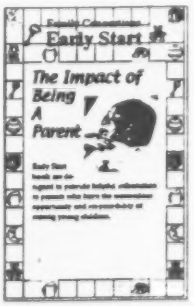
AEL developed this research-based tool to help school leaders look at their progress toward standards-based instruction. What you and your colleagues learn can help to create strong improvement and professional development plans.

The tool includes

- A set of six indicators that will show if you have
  - a curriculum aligned with content and assessment standards
  - a curriculum validated for rigor, alignment, and balance
  - classroom assessments that check mastery and predict success on standardized tests
  - a taught curriculum that matches written and tested curricula
  - a system for using data to guide school improvement decisions
  - district policies and resources that support standards implementation
- A Comprehensive Profile Chart for interpreting the six indicator ratings
- A planning form, Charting Your Course—An Action Plan for Implementing Standards, to use with school faculty and/or district administrators

Family Connections Early Start

This series of 10 four-page briefs contains useful, easy-to-ready information for families with infants and toddlers. The full-color booklets draw on the latest brain research and child development information from experts with experience in research and practice. Topics discussed include an introduction to babies, choosing and using child care, nutrition, language development, first toys, and more. Briefs are designed to be distributed individually or as sets by early childhood providers or medical programs. They could help you develop good school–community relationships as they also help young children get ready for school.



Curriculum Creator: A Web-based Curriculum Mapping and Design Tool

This online tool powers success in aligning curriculum with state standards and helps schools and districts address accountability, equity, and achievement.

The Curriculum Creator works from the classroom up to create a clear picture, or map, of how activities and units combine to meet standards at all levels, K-12. It works from the district down to help educators identify gaps and repetitions in the taught curriculum, then design new activities and assessments to help students improve their test scores.

Available by subscription, the Curriculum Creator

- helps you align your curriculum to state standards
- provides your state standards in a database that is updated when the standards change
- links standards and assessments to classroom activities
- publishes maps and reports that clearly demonstrate how the taught curriculum aligns with standards
- centralizes instructional plans to create a databank of activities that meet K-12 standards and promote accountability, equity, and achievement
- maximizes results through targeted instruction
- reduces paperwork and increases collegiality and collaboration

An assistant principal in Tennessee says, "This tool makes teachers accountable as their maps can be matched against Terra Nova and report card results." A Tennessee teacher says, "The ability to build this gigantic activity bank, linked to standards, and have it available to draw from year after year, makes it so much easier to address multiple intelligences and levels of student learning."

TransFormation

Shortcutting the time it takes for policymakers to put the latest education research into action is the mission of *TransFormation*. The inaugural issue of this 8-page, twice-a-year publication offers policy-related implications of findings on the importance of involving teachers early in planning for improvement, getting the best results once a reform model is selected, what it takes to sustain comprehensive reform, and more. Special attention is given to findings relevant to improving low-performing schools.

The title recognizes the notion that before student learning improves, positive transformations—deep and lasting changes in form, nature, or function—are needed and can be detected in teaching, curriculum, and school climate.

The online pdf version is available at http://www.ael.org/transform. Print subscriptions may be ordered online or by contacting Kim Cook at 800-624-9120 or cookk@ael.org.

See inside for ordering information.

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Resources Available from AEL

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___ **A Guide to Gender Fair Education in Science and Mathematics (1998)** Ⓦ

This publication presents information gathered from hundreds of teachers and researchers in the field of education equity. Highlighted are examples of programs supported by the U.S. Department of Education and National Science Foundation, as well as states, counties, and cities. It includes an annotated bibliography. $15; 40 pp.

___ **A Teacher's Guide to Project-Based Learning (2000)**

Introduces the ideas and methods that underpin project-based learning. Includes profiles for 13 types of projects, a step-by-step planning guide, an annotated list of references, and more. $16; 98 pp.

At a Glance: ADHD and IDEA 1997 (2000) Ⓦ

This issue of *Policy Briefs* offers an overview of federal requirements as well as information specific to the AEL region. It and the monograph from which it was excerpted, *ADHD and School Law*, are available only on our Web site. Free. http://www.ael.org/rel/policy/adhd2000.htm.

___ **Briefs for Parents** Ⓦ

These sets of six articles are ready to cut and paste into your newsletter, newspaper, or periodical. Each addresses a child development or education topic of concern to parents. They are available free (limit one copy of each set per order). Check the set(s) you wish to receive.

___ Brief articles for a general audience of parents (English only)

___ Spanish language brief articles for parents (with English translations) 1999 edition. http://www.ael.org/eric/parents.htm.

___ **Charter Schools: The Perspective from AEL's Region (1998)** Ⓦ

This issue of *Policy Briefs* discusses the status of charter school legislation in Kentucky, Tennessee, Virginia, and West Virginia; regional concerns for policymakers; and effects of federal criteria on funding. $2; 8 pp. http://www.ael.org/rel/policy/charter.htm.

___ **Creating Safe Rural Schools (1999)**

In this videotape, educators who have designed and implemented safety programs at the state, district, and school levels suggest ways to create safe rural school settings. $15; 58 minutes.

Curriculum Creator (2000)

A Web-based tool that helps teachers and administrators create and align curriculum to standards, collaborate and share materials, and map semester and/or yearly lesson plans. One-time set-up fee and annual subscription prices are based on school enrollment—call 800-624-9120 for information or to arrange an online demo.

___ **Curriculum Snapshots (2000)** Ⓦ

This publication provides glimpses into the classrooms of real teachers to illustrate appropriate and creative uses of technology at all grade levels and within different subject areas. $10; 108 pp. Access to the companion Web site (http://www.ael.org/snapshot) and downloadable documents is free. The Web site offers a searchable database of lesson ideas and information on how to submit your own.

___ **Dissolving the Boundaries: Planning for Curriculum Integration in Middle and Secondary Schools (1999 revision)**

This publication helps secondary school faculties prepare for curriculum integration through a four-step process. The recent revision integrates technology use into the curriculum units. Book with 78-page facilitator's guide, $31; single or additional copies of book, $16; 83 pp.

___ **Distance-Based and Distributed Learning (2000)**

As more school districts and education institutions explore distance-based learning, they need to know what to think about as they design or acquire courses. This easy-to-use decision tree can help. $2.

Educational Software Use: The 2000 Report (2000) Ⓦ

This survey of teachers in the region looked at technology training, beliefs about the importance of software use, barriers to software use in the classroom, software selection practices, and more. Go to http://www.ael.org/rtec/survey.htm.

___ **Elementary Change: Moving Toward Systemic Reform in Rural Kentucky (2000)**

This book captures the results of AEL's 10-year, qualitative study of systemic school reform in four rural Kentucky districts. It presents findings and recommendations to help educators and policymakers keep KERA on track. $20; 244 pp. (ISBN 1-891677-09-8)

___ **Family Connections Early Start (2001)**

This series of 10 four-page briefs contains useful information in an easy-to-read format. Designed for families with children ages zero to three, the full-color briefs address such topics as nutrition, first toys, language development, and more. Sample set of 10 briefs: $3. Package of 20 sets (10 briefs per set): $24.95.

___ **Family Connections Parent Notebook**

The *Family Connections* learning guides are now in a notebook for parents and available in three volumes: *Family Connections 1* is for families of preschool children, *Relaciones Familiares 1* is the Spanish-language version, and *Family Connections 2* is for parents with kindergarten children. Each notebook contains a set of 30 four-page guides, plus tips for using them. $14.95 each ($11.95 without 3-ring binder).

___ **Graphing Calculators in Mathematics Grades 7-12** Ⓦ

This resource guide offers lessons covering a wide variety of mathematical concepts and topics. Planned for teachers with no experience with graphing calculators and for those who have used the instruments since inception, these lessons emphasize hands-on problem-solving approaches, with connections to science and the real world. $39; 250 pp. http://www.ael.org/calculators.

___ **Improving Rural School Facilities: Design, Construction, Finance, and Public Support (2000)**

While the condition of rural school facilities varies across the country, most rural school districts face similar issues. In this book, editors Sarah Dewees and Patricia Cahape Hammer present discussions of these issues from several perspectives. $18; 132 pp. (ISBN 1-891677-05-5)

___ **In Accord with Nature (1999)**

This book demonstrates how educators and youth leaders can help middle and high school students understand and define their relationship to nature. Alternative teaching strategies and structured activities connect students with the natural and the built worlds. $19; 192 pp. (ISBN 1-880785-20-X)

___ **Inside School Improvement: Creating High-Performing Learning Communities (2000)**

Researchers, teachers, principals, parents, and students collaborated on this book. Their stories, reflections, and discussions of theory provide inspiration as well as food for thought and dialogue. Included are practical tools, activities, and resources to use right away. $35; 328 pp. (ISBN 1-891677-10-1)

___ **K-8 Building Blocks for Algebra (1998)**

Recent brain research supports what teachers have long observed: students learn by fitting new information with what they already know. This publication provides activities that bring the real world into the classroom and help children make sense of the relationships between numbers. $18; 108 pp.

___ **Making Resources Matter: A Systematic Approach to Developing the Local Consolidated Plan (2000)**

This series guides school districts as they develop a consolidated plan for programs and resources. The 10 modules address all components of the planning process and offer sugestions for developing a plan to use resources effectively. Boxed set: $25.

___ **Next Steps: Research and Practice to Advance Indian Education (1998)**

Editors asked a dozen indigenous scholars and practitioners to help answer such questions as What is "Indian education" today? and How will it look in the future? The essays they received help readers explore the issues that face educators who work with indigenous students. $28; 317 pp. (ISBN 1-880785-21-8)

___ **Notes from the Field: Evolution of the Primary Program in Six Kentucky Schools. Vol. 8, No. 1 (1998)** (W)

In this issue, researchers examine the development of the primary program in six rural Kentucky elementary schools. The most detailed description comes from 1996-97, when researchers narrowed the focus of their work to the class of 2006. $2; 12 pp. plus 8-page supplement. http://www.ael.org/pnp/notes.

Notes from the Field: KERA in the Classroom. Vol. 7, No. 1 (2000) (W)

In this issue, researchers present findings and recommendations based on analysis of data gathered during AEL's 10-year study of four school districts. http://www.ael.org/rel/policy/note2000.htm.

___ **Patterns of Promise (2000)**

This book describes exemplary uses of technology at 12 schools. Large and small, well-to-do and low income, urban and rural—these schools all take creative and innovative approaches to using technology and finding funding. $15; 116 pp. (ISBN 1-891677-07-1)

___ **Principal Connections (2000)**

This CD-ROM can help school leaders examine their roles as technology leaders, identify barriers to technology integration, learn strategies to help teachers accept technology, and more. $10. The companion Web site supplements and updates the CD-ROM and links to sites of interest to technology leaders (http://www.principalconnections.org).

___ **Reaching Out: Best Practices for Educating Mexican-Origin Children and Youth (1998)**

Harriet Romo of the University of Texas at Austin describes successful approaches to improving outcomes for this growing population of U.S. students. $24; 232 pp. (ISBN 1-880785-22-6)

___ **Recruiting and Training Volunteer Tutors of Emergent and Beginning Readers (1998)**

This manual identifies characteristics of effective tutoring programs; suggests ways to recruit tutors and select the students they'll work with; presents a model for conducting tutor training sessions; and provides activities tutors can use to help readers with comprehension, word study, and writing activities.

___ Trainer's package (90-minute video, 64-page manual, and 15 activity cards). $225.

___ Tutor's package (64-page manual and 15 activity cards). $30.

___ **Rural School Administrators' Resource Kit (2001)** (W)

The kit includes the *2001 Rural Education Directory: Organizations and Resources*. It also contains the following tools: (1) Assessing Parent Involvement: A Checklist, (2) Community Asset Mapping, (3) Community Engagement: An Inventory, (4) Creating Safer Rural Schools: Involving the Community, and (5) Rural School Facilities Planning Process. The directory is free online at http://www.ael.org/eric/ruraled. The tools are at http://www.ael.org/rel/rural/abstract/toolkit.htm. Print copy: $20, approx. 90 pp.

___ **School-Based Programs to Promote Safety and Civility (1998)** (W)

This issue of *Policy Briefs* focuses on more than 20 primary and secondary level antiviolence programs, all of which get a thumbs-up from researchers. Complete contact information is provided for each program. $2; 12 pp. http://www.ael.org/rel/policy/schbas.htm.

___ **Schools for Disruptive Students: A Questionable Alternative? (1998)** (W)

Recent legislation and commitments to provide safe learning environments have prompted states to create alternative schools for disruptive students. This issue of *Policy Briefs* reviews research and suggests indicators for judging the effectiveness of alternative school legislation. $2; 8 pp. http://www.ael.org/rel/policy/disrstd.htm.

___ **Small High Schools that Flourish: Rural Context, Case Studies, and Resources (2000)**

This book discusses small rural high schools in the United States and why we should care about them. It then takes a closer look at four particular schools located in communities of very modest means. Edited by Craig B. Howley and Hobart L. Harmon. $20; 200 pp. (ISBN 1-891677-06-3)

___ **Standards Implementation Indicators: Charting Your Course to High Achievement (2000)**

An easy-to-use tool to help school leaders look at their progress toward standards-based instruction. Includes six indicators, a profile chart, and a planning form. $14.95. An electronic version of the tool is available at http://www.ael.org/indicate.

___ **The ABC's of Parent Involvement (1998)**

This book offers information, inspiration, ideas, and expert advice to parents with children of all ages. AEL's Family Connections staff contributed early childhood knowledge. 134 pp. Single copies are $3, and a box of 50 costs $70 east of the Mississippi or $75 west of the Mississippi, shipping included.

___ **UnCommon Knowledge: "The Voices of Girls" Documentary (2000)**

Girls from one of the poorest rural counties in the United States surprised their families, teachers, and even themselves on a three-year exploration of the science and mathematics of everyday life. See the powerful impact of the Voices of Girls project, funded by the National Science Foundation and operated by AEL. Videotape, $15; 57 minutes.

UnCommon Knowledge: Guides for Hands-on Science and Math (2000) (W)

Volume One includes activities on the science of folk medicine and natural dyes, the science of nutrition, and the science of food preservation. Volume Two contains the mathematics of quilting and making art through mathematics. The guides are free and available only from the ERIC pages of AEL's Web site at http://www.ael.org/eric/voices.

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learn from other schools that have succeeded against the odds.

- Building school capacity requires a judicious blend of pressure and support. This may come from a "critical friend" at the school level. Perhaps a team of change agents and instructional specialists can best accomplish this balance.
- Building capacity requires change agents to "think big" and "start small."* Link short-term goals and wins to focus on building core capacity and break the cycle of low performance. Context-specific steps should deal with the whole school and lead to changed expectations.

Strategies for systemic change at national, state, and district levels. Rich school cultures do not grow in arid district and state cultures. In the words of Andy Hargreaves, "Dead wood didn't kill itself." How and what are the state and district roles in working effectively with low-performing districts and schools respectively? Participants agreed that administrative levels must provide performance data so schools can anticipate and act on low performance before it becomes an intractable problem. Effective problem-solving initiatives involve people, funding, and frameworks, and state departments and districts contribute to all three. In particular, a number of participants suggested that schools and teachers need teaching–learning frameworks that have a widely accepted empirical base. Specifically, colloquium contributors recommended attending to the following issues if systemic change policies are to be successful:

- A key issue is how to measure progress. An action step would be to establish some guiding principles for defining progress.
- A major issue is measuring attainment (scores on tests) versus achievement (what students are learning) and how tests often negatively affect inquiry-based change. We are "trying to grow oak trees, and the misuse of tests cuts them off as saplings when they are not doing well enough," explained Steven Ross of the University of Memphis.
- A possible action would be to determine what models work best in what situations, and to assess their cost effectiveness. Another possible action is to determine how many low-performing schools a state can effectively work with at any one time.
- Schools need "truth tellers" or "critical friends." This role may be best filled by employing a team of people with various types of expertise and by providing

(continued on page 8)

We are "trying to grow oak trees, and the misuse of tests cuts them off as saplings when they are not doing well enough."

—Steven Ross of the University of Memphis

Norms and Culture

Culture can be described as the "way we do things around here" or as "how things work when no one is looking." Cultural norms are the unwritten rules of a school. A school with internal capacity operates according to these norms:

Shared Goals: "we know where we're going"
Responsibility for Success: "we can succeed"
Collegiality: "we're working on this together"
Continuous Improvement: "we can get better"
Lifelong Learning: "learning is for everyone"
Risk Taking: "we learn by trying something new"
Support: "there's always someone there to help"
Mutual Respect: "everyone has something to offer"
Openness: "we can discuss our differences"
Celebration and Humor: "we feel good about ourselves"

Stoll, Louise and Dean Fink. *Changing Our Schools: Linking School Effectiveness and School Improvement.* Bristol, PA: Taylor Francis, 1996.

*Fullan, Michael G. *The New Meaning of Educational Change.* New York: Teachers College Press, 1991.

An Important Agenda

(continued from page 7)

mechanisms to gather data to inform decisions and to improve teaching and learning.

- Inquiry based on evidence requires time to analyze data and to arrive at common understandings of their meaning, and time to develop action plans around the data. State departments and districts can help schools by addressing issues of time.

Action research as a vehicle for improving low-performing schools. Action research involves both external and internal researchers, who collaboratively frame questions and actions around improving processes in the school. To this end, colloquium participants suggested that schools and school systems should take several actions.

- View action research for individuals and for whole schools as an integral aspect of practice and not as an "add-on." This requires teachers to focus on their practice for purposes of improvement, not for fault finding. It must be viewed as a professionally enriching experience.
- Use external research to promote school improvement and assist schools in becoming effective consumers of research.
- Engage such stakeholders as businesses, cultural institutions, students, and parents in action research to contribute important contextual knowledge to guide improvement. This involvement may be particularly valuable in "cruising" or "strolling" schools where some teachers have a vested interest in not changing.
- Develop effective school–university networks that use action research to promote school improvement. Virtually all the assembled researchers were engaged in vibrant and extensive partnerships with schools in all three countries represented.

Guiding Questions for Research

In groups by state, and working with researchers, the state department representatives identified a number of research and development activities to address issues of low-performing schools. The following guiding questions point to directions identified as holding promise.

- What kind of state interventions have worked well elsewhere?
- Does how a state department enters and exits a district impact local capacity?
- What could be gained by separating management from instruction in a school or district takeover?
- What is the optimum length for an intervention involvement?
- How can school improvement plans be effectively and efficiently monitored?
- How does a state look at community change as capacity building within the school improvement process?
- What kinds of state policy structures best support successful school improvement efforts at the district and school levels?
- How can models of professional development be most effectively matched to state curriculum and achievement standards to influence school capacity and improvement?

Lessons Learned

- Improvement strategies depend in large measure on the context of a school—one size does not fit all.
- How a jurisdiction defines performance tends to dictate improvement strategies.
- School improvement is difficult—there are no silver bullets.
- Schools can succeed against the odds—a school's student population may be a reason but not an excuse for low performance.
- Schools need critical friends.
- Effective leaders at all levels are crucial to school improvement.
- State and district contexts have a direct bearing on school performance. Improvement requires consistent, long-term policy support.
- Sustaining change depends on building cultures of inquiry.
- School improvement requires dedicated resources—money, expertise and, above all, time.

This report was prepared by Dean Fink, education consultant and colloquium participant, and Nancy Balow, AEL staff writer.

Grant Opportunities

Find more grant opportunities at http://www.schoolgrants.org. Consider also watching the Federal Register, published every weekday at http://www.access.gpo.gov/su_docs/fedreg/frcont01.html.

Federal Programs

National Science Foundation: Science, Technology, Engineering, and Mathematics Teacher Preparation

Purpose: To develop exemplary science and mathematics preK-12 teacher education models that produce and retain effective teachers who have the skills, confidence, and commitment to enable all students to attain high standards of achievement in mathematics, science, engineering, and technology.

Partnerships involving institutions of higher education and K-12 school districts will address local teacher shortages by developing and implementing effective strategies for recruiting prospective teachers with strong backgrounds in science and mathematics into teacher certification programs. Projects will address such areas of local need as workforce diversity, urban or rural teacher shortages, and shortages within specific disciplines or grade levels.

It is anticipated that proposers will primarily be universities, colleges, or nonprofit organizations.

Deadline: October 25, 2001

Information and application available online at http://www.nsf.gov/cgi-bin/getpub?nsf01136.

Other

National Science Teachers Association: Toyota TAPESTRY Grants

Purpose: To recognize and support teachers whose projects will help students make a passionate connection with science.

Grants come in two sizes: $10,000 (50 will be awarded) and $2,500 (20 will be awarded). K-12 teachers may apply individually or in teams.

Entries will be judged on innovative approach to teaching science, ability to create a stimulating and hands-on learning environment, interdisciplinary approach, and ability to increase student participation and interest in science.

Deadline: January 17, 2002

Application and information available online at http://www.nsta.org/programs/tapestry or by phone at 800-807-9852.

National Science Teachers Association: Award Programs

Purpose: To encourage exemplary science teaching.

Sponsored by various corporations and administered by NSTA, these awards offer teachers and school leaders cash and/or equipment awards in addition to one-year memberships in NSTA and up to $500 to attend NSTA's national conference. Here are brief descriptions of three awards:

The Exemplary Middle Level and High School Principal: Recognizes one principal at each level with a $1,000 award.

Barrick Goldstrike Exemplary Elementary Earth Science Teaching: Recognizes a K-6 science teacher and awards a computer system, $2,500 for purchase of school materials/equipment, and trip to the Nevada Mining Association's Minerals Education Workshop for teachers.

Ciba Specialty Chemicals Exemplary Middle Level and High School Science Teaching: Recognizes one teacher at each level and awards $1,000 to each.

Deadline: November 15, 2001

Application and information about these and other awards available online at http://www.nsta.org/programs or by phone at 888-400-6782 (in 703 area code call 312-9399).

Blockbuster's Good Grades, Free Rentals Program

Blockbuster rewards students for hard work in school. K-8 students who have an A or B average on their report cards can present the cards at their neighborhood stores to receive a free video rental.

Publications of Interest

Technology Resources

The U.S. Department of Education Office of Education Technology has a useful Web site filled with a variety of education technology information. One example is the list of state technology contacts. The site also has information on budget and legislation, the digital divide, distance learning, evaluation and assessment, Internet safety, and more. Visit http://www.ed.gov/Technology.

Data for Policymaking

The Council of Chief State School Officers (CCSSO) has just produced its biennial publication *Key State Education Policies on K-12 Education*. The 2000 update includes reports on policies related to attendance, graduation requirements, content standards, teacher and administrator licensure, and student assessment. This is one of CCSSO's most widely requested and used publications. It provides state legislatures and boards of education with consistent, reliable information on similarities and differences in state policies, thus helping policymakers and leaders make informed decisions about policy changes.

The publication costs $10 and may be ordered online at http://www.ccsso.org or by phoning 202-408-5505.

Building a Learning Community Culture

Schools undertaking improvement need supportive cultures and conditions to succeed. *Professional Learning Communities*, from the Southwest Educational Development Laboratory (SEDL), provides a review of the five dimensions along which a school staff should operate in order to become a learning community and discusses the role such a community can play in school reform.

The publication costs $22. To order, contact SEDL by phone at 800-476-6861 or online at http://www.sedl.org.

Enlisting Students in School Improvement

Students have worthwhile ideas for improving their learning and can provide energy to school improvement efforts.

Those were among the conclusions of the School Change Collaborative, a learning community composed of regional educational laboratory researchers, school practitioners, and students. One result of their work is a toolkit to help schools across the country incorporate student perspectives into their improvement efforts.

Listening to Student Voices Self-Study Toolkit includes four tools devised and tested by the collaborative: Data in a Day, Structured Reflection Protocol, Student-Led Focus Group, and Analyzing Surveys with Kids. The toolkit is packaged in two parts. The Introductory Materials Package costs $20 and includes an introductory booklet, 10-minute overview video, a school story for each tool, and five introductory brochures. The boxed Self-Study Toolkit ($165) includes a guidebook for each tool and videos about three of the four tools.

To order, contact Northwest Regional Educational Laboratory by phone at 503-275-0458 or online at http://www.nwrel.org.

Redefining the Teacher as Leader

The Institute for Educational Leadership recently released the report of the Task Force on Teacher Leadership. A panel representing professionals from business and education assembled to declare "The time is now to use an untapped resource for leadership and reform." The report is intended as a tool for communities to initiate discussion and action.

The report highlights some promising practices, including

- the Milken Family Foundation's Teacher Advancement Program, which is piloting an effort to provide opportunities for professional growth and career advancement, along with competitive salaries
- the Teacher Union Reform Network, launched by American Federation of Teachers and National Education Association locals, to promote new forms of union/management collaboration, and recast unions to focus more of their work on achievement and instructional issues
- an increasing number of teacher education programs that have developed alternative routes to teaching, such as The Navajo Teacher Education Program, the California Math/Science Teacher Corps Project, and The Delta Effective Leaders in

176

Teaching at Arlington program of The George Washington University.

Copies of the report are available by phone at 202-822-8405 or online at http://www.iel.org.

ENC Focus on Standards

ENC Focus: A Magazine for Classroom Innovators, on the topic Teaching in the Standards-Based Classroom, is now available online. This issue of the Eisenhower National Clearinghouse publication includes

- The Heart of Systemic Reform. This article presents visions of the standards-based classroom from the book *Using Data-Getting Results: Collaborative Inquiry for School-Based Mathematics and Science Reform.*
- Student Learning Groups that Really Work. Some ways teachers can enhance the effectiveness of group work.
- A Snapshot of Assessment in a Standards-Based Classroom. A member of the NCTM Standards 2000 Writing Team shows how assessment provides guidance for the learning journey.
- Destination: Standards. A principal describes data sources that will help unify schools as teachers work to change their practice.
- There Are Standards and Then There Are Standards. Students are not the only ones facing tough new challenges. This article looks at the National Board for Professional Teaching Standards.

The publicaton is available at http://enc.org/focus/standards.

The Promise of Urban Education

The Annenberg Institute sponsored a group of Senior Fellows in Urban Education who worked individually and collaboratively over two years (1998-2000) to consider and promote aspects of urban education that could serve as models of educational excellence. As part of their collective work, the Fellows developed a set of analytical lenses through which to describe, critique, and facilitate the promise of urban education. Coded AEIOU, the lenses focus on developing Agency to bring about Equity and social justice through links between Instruction and curriculum and their Outcomes and impacts, with a particular emphasis on Urban conditions and contexts.

For the complete description, visit http://www.annenberginstitute.org/leadership/senior_promise.html

Accountability Tools

The Annenberg Institute has built a *Toolbox for Accountability* that contains tools to help gauge progress toward improved student achievement.

The toolbox contains several drawers: accountability events, surveys, ways to examine student work samples, school visits and self study, analyzing and tracking standardized test data, school report cards, ways to analyze teacher assignments, and monitoring equity and access. Each drawer will be available in both Web (free) and expanded print versions ($55 each).

To order, contact Annenberg by phone at 401-863-7990 or online at http://www.annenberginstitute.org.

Innovations for Better Teaching

"We have traditionally told students what *we* see and what *we* value—very often at precisely the point in their learning where they should be discovering what *they* see and what *they* value. In doing so, we have reduced the likelihood that students will use past experiences in writing to shape subsequent experiences. We have eliminated the valuable opportunities for students to learn about themselves and about their writing. . . If students are to become thoughtful writers and learners, they must be taught how to reflect on their experiences and analyze and evaluate their work."

(continued on page 12)

New at FREE

Sixteen new resources in the arts, educational technology, language arts, science, social studies, and vocational education were recently added to the Federal Resources for Educational Excellence (FREE) website. FREE makes it easy for teachers, parents, students, and others to find teaching and learning resources from more than 40 federal organizations. Go to http://www.ed.gov/free.

Publications of Interest

(continued from page 11)

Teachers who want to incorporate these activities into their classrooms can get some practical advice in "Reflection: A Key to Developing Greater Self-Understanding," a chapter from *Becoming a Better Teacher: Eight Innovations That Work* by Giselle O. Martin-Kniep. To read the chapter on reflection, visit the ASCD Web site at http://www.ascd.org/readingroom/books/martinkniep00book.html#chapter7.

In addition to reflection, the book discusses essential questions, curriculum integration, standards-based curriculum and assessment design, authentic assessment, scoring rubrics, portfolios, and action research.

Making Teaching Better

Research tells us that the single most important in-school factor for improving student achievement is teacher quality. To help states and communities find ways to support better teaching, the U.S. Department of Education's Teacher Quality Initiative offers *Eliminating Barriers to Improving Teaching*.

The booklet devotes a chapter to each of six challenges: teacher recruitment, teacher preparation, licensing and certification standards, professional development, teacher retention, and development of school leaders. Barriers to each challenge are defined, as are suggestions for overcoming them. The booklet mentions existing efforts to address barriers, drawing examples from the experiences of schools across the country.

The publication is free online at http://www.ed.gov/inits/teachers/barriers2000/Barriers2000.pdf or by phone at 877-4-ED-PUBS.

AEL is a private, nonprofit corporation. AEL serves as the regional educational laboratory for Kentucky, Tennessee, Virginia, and West Virginia. For these same four states, it operates the Eisenhower Regional Consortium for Mathematics and Science Education. In addition, it serves as the Region IV Comprehensive Center and operates the ERIC Clearinghouse on Rural Education and Small Schools. AEL houses the Institute for the Advancement of Emerging Technologies in Education (IAETE) and the Alliance for Excellence in Learning, a subsidiary corporation. AEL's primary source of funding is the Office of Educational Research and Improvement (OERI), U.S. Department of Education. This publication is produced with funds from OERI contract number ED-01-CO-0016. The contents herein do not necessarily reflect AEL or OERI policies or views.

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Connecting School and Community Through Technology

From 1995 to 2000, the U.S. Department of Education sponsored the Technology Innovation Challenge Grant program (TICG). It made 5-year grants to local education agencies in partnership with community businesses and/or organizations.

Seeds of Innovation: Three Years of the Technology Innovation Challenge Grant Program, a forthcoming AEL publication, will review the 1995 to 1997 projects. The hope is to help other schools adopt or adapt technology practices to improve teaching, learning, and parent and community involvement in schools.

Examples of innovative uses of education technology to reach out to parents and community appear in the following "samplings" from the project profiles.

The full publication will be available soon—watch *The Link* and the AEL Web site for announcements.

Anderson Community Technology Now (ACT Now!)

Anderson, Indiana
www.acsc.net/actnow

Anderson's economy suffered when unskilled, relatively high-paying auto manufacturing jobs were lost. The next generation of jobs required higher levels of training and proficiency with computers. ACT Now! set three main goals, one of which was to increase educational opportunity for the entire community.

The primary strategy leveraged reforms already in place, including a program known as The Buddy System, an independent system funded by the Indiana General Assembly and private donations from businesses and industries.

The Buddy System aimed to enhance student performance; the hope was that

(continued on page 2)

IN THIS ISSUE

Technology in Education
Connecting School and Community Through Technology; p. 1

School Improvement
How Do Kids See Their Own Achievement?; p. 3

Research Notes
How Schools Help Students Learn; Raising Private Money for Public Schools; Community Schools Show Promise; p. 4

New Resources from AEL
Graphing Calculators in Middle Grades Mathematics; School Counselors; order form/insert

Grant Opportunities
Federal and More; p. 8

Publications of Interest
"Powerful Learning with Public Purpose"; NASA Images Bring Universe to Classrooms; A Virtual Backpack for Parents; *ERICNews* Available Online; New Look for www.ed.gov; Including English Language Learners in Assessments; Consult the Knowledge Loom; p. 10

Announcement
Transforming Middle Schools: Focus on Instruction, Grades 5-8; p. 12

The Link is free to educators in the AEL region. Readers are encouraged to reproduce its contents, giving proper credit. On request, AEL will provide camera-ready copy on white paper. Current and many back issues are available in PDF at http://www.ael.org.

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Connecting Through Technology

(continued from page 1)

placing computers and printers in classrooms and in students' homes would encourage more time on-task for learners. Using The Buddy System also helped parents, especially those affected by the employment changes.

The mere presence of computers was not enough, of course, so ACT Now! funds also provided support in the form of child care and access to the Internet and e-mail. A total of 801 computers were loaned to homes where 2,300 children had access (including brothers and sisters of the students who qualified for the program).

ACT Now! included a Community Technology Center with computer stations and Internet connections at the public library and provided computers at some social service agencies, including public shelters for homeless families. One Stop Career Centers in high schools and public agencies were sponsored by the local employment resource agency.

Parents were impacted in two ways: they became more aware and supportive of what was happening in their schools, and they improved their skills. For example, they learned to write resumés and conduct Internet searches, and sought advanced computer training.

Greene County Technology Initiative

Greene County, Pennsylvania
http://gctc.waynesburg.edu

Knowing the importance of schools to the economic viability of communities, five school superintendents from the Greene County area created a long-term project that utilized the schools as agents of change. The county had long relied on an unskilled workforce, and the project sought to impact economic development by creating a technology-supported education system that would prepare students for higher education, advanced technical training, and business ownership and management.

The project's advanced technology training programs certified graduates and placed many directly into technology careers. Three Web-based businesses were also created.

Richland Clicks!

Richland County, South Carolina
www.richlandclicks.org

Many educators have been frustrated by limited technology and resources. Richland County pioneered some innovative methods to increase the availability of technology. Among those directed specifically at community members were establishing 16 community access centers with Internet-ready computers and providing computer instruction on weekends and in the evenings.

One intriguing aspect of the project was the Mobile Technology Lab, a 37-foot Winnebago that traveled the community to provide access to technology and increase the knowledge and skills of students and their families. The van housed a child development classroom for preschoolers whose parents were using the facility. It served private day care centers two days a week and

(continued on page 7)

Recently, AEL became the first education institution in the world to use new Digimarc MediaBridge technology, which employs digital watermarks to instantly link printed materials with the World Wide Web. You can recognize an Internet-enabled page by the symbol you see at the right and in the green bar below.

Most pages of *The Link* contain an image (a star) embedded with a Digimarc. When you hold the star up to a digital camera connected to your desktop computer, the Digimarc MediaBridge software reads the watermark, activates your Web browser, and delivers AEL's Web site to your screen. From there, you will be able to launch related Web sites and access a wealth of information—without typing long URLs.

Please join us in exploring the benefits of this evolutionary technology. Go to www.LookForTheD.com to download and install the free Digimarc MediaBridge software. This new technology promises to expand the way we read and use printed materials.

180.

How Do Kids See Their Own Achievement? Just Ask Them

Reprinted by permission from HORACE, *Volume 17, Number 1 (November 2000). Oakland, CA: Coalition of Essential Schools, www.essentialschools.org.*

Educators might increase their own effectiveness by simply finding out what kids say about their own learning, in order to better understand their students' strengths, aspirations, learning histories, and accomplishments. In a project sponsored by the national organization Fairtest, Massachusetts researcher Anne Wheelock is collecting information on how students regard their own learning and achievement in a number of contexts, including state standardized tests. Although most students entered ninth grade with the intention of graduating and going on to postsecondary education, she has learned, even students who passed their courses and contributed to their schools and communities begin to question their academic identity when faced with failing test scores. Among her questions, from which teachers might select to fit their own context:

- Do you plan to graduate/have you graduated from high school:___ When?
- At this point, do you have any plans for what you will be doing after high school? (Talk about more than one if relevant, with details.)
  Work: Parenting: Travel:
  School: Military: Other/no plans:
- When you think about life after high school, would you say you will feel:
  Prepared? If so, in what way?
  Unprepared? If so, in what way?
  What you are looking forward to?
- People are smart in a lot of different ways. Outside of school, what things are you good at and do you like to do in your own time?
  Sports Working at a paid job
  Playing music or singing Martial arts
  Speaking a language besides English
  Religious activities Drawing or painting
  Helping out in the family Cooking
  Building things Working on computers
  Explaining things to others Babysitting
  Helping out in community or religious center
  Helping people in trouble Other
- Is there something you do well that your teachers don't know about?
- Where have you lived in your life until now?
- How many schools did you go to before this?
- If you ever went to school in another country or city or state, how does your current school compare?
- Tell me about the best learning experience you've ever had in school (anywhere):
  Best teacher (say why):
- Something you are happy you learned:
- Best book you read recently:
- Best year you have had in school:
- Best subject you have had in school:
- What is the work you've done that you're most proud of?
- What inspires you to work hard in school?
- Do you participate in any extra or after-school activities in school? Clubs? Sports? Other?
- Circling *all* that apply, what kind of student would you say you are?
  Great Lazy Creative
  Pretty good Bored Teachers like me
  Hard-working Better than some Bad
  Not so bad Worse than some
  Serious Interested I get by
  School's not for me
- What is the average grade you get on your report card?
- Best-ever grade? Best semester average?
- Have your grades improved since ninth grade?
- How often do you go to the library in your school?
- How often do you use calculators in math class?
- What kind of work do you do on computers?
- Before taking the state test, did anyone offer you and other students extra help? (If yes, details?)
- Have you ever had to repeat a grade? (If yes, what grade? What was that like?)
- Have you ever been in bilingual or ESL classes?
- Have you ever been part of a resource room?
- Have there ever been any things you wanted to do in school but didn't get to do or weren't allowed to do?
- Have you ever thought about dropping out of school? If so, why? What stopped you?

Research Notes

The U.S. Department of Education's Office of Educational Research and Improvement funds research through regional laboratories, national centers, and field studies.

Research from the nation's 10 regional laboratories can be found on the Internet at www.relnetwork.org.

The work of the 12 national centers is available at http://research.cse.ucla.edu.

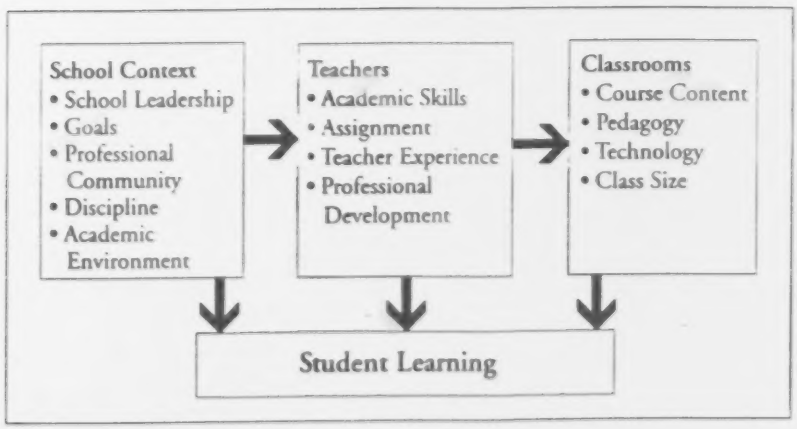
How Schools Help Students Learn

From the U.S. Department of Education, National Center for Education Statistics

Monitoring School Quality: An Indicators Report reviews literature on school quality to help readers understand what is known about school characteristics related to student learning. It identifies where national indicator data are available and reliable, and assesses the current status of schools.

Research indicates three areas of school quality that affect student learning: (1) training and talent of the teaching force, (2) what goes on in the classrooms, and (3) the overall culture and atmosphere of the school. Within these are identified 13 indicators of school quality that recent research suggests relate to student learning. The current status of school quality is assessed in relation to these areas and indicators.

The figure below illustrates the areas, indicators, and their relationships to one another and to student learning.



Monitoring School Quality: An Indicators Report, NCES 2001-030, page ii.

The report warns that high-quality data are not available for every indicator and assesses current status according to those with the most reliable data. Summaries of findings about those follow.

Academic skills of teachers. Students learn more from teachers with strong academic skills. Generally, graduates with the best scores are more likely to teach in private schools and/or leave the profession within less than four years, and they are less likely to teach in high-poverty schools.

Teaching assignment. Middle and high school students learn more from teachers with advanced degrees in the subjects they teach, but these teachers are often assigned out of field.

Teacher experience. Students learn more from experienced teachers, but schools with the highest concentrations of minority students and the highest poverty had nearly twice as many inexperienced teachers as did low-poverty, low-minority schools.

Professional development. Experts agree that high-quality professional development should enhance student learning, though data to demonstrate that relationship are not available. Data do show 99 percent of the nation's teachers participated in some type of professional development in 1998.

Course content. When students take higher-level academic courses they learn more. In 1998, high school students were much more likely to take advanced math and science courses than were students in 1982. However, some racial/ethnic and income groups continue to be less likely to enroll in college preparatory classes.

Technology. Student learning of discrete skills seems to improve when computers are used for instruction. Computer availability and usage, and Internet access, are increasing rapidly. However, schools with high concentrations of poverty are lagging well behind low-poverty schools.

Class size. Students in classes with 13 to 20 students show greater achievement gains than students in larger classes. In 1998, the average public elementary school class had 23 students. Large-scale efforts to reduce class size can have negative consequences if unqualified teachers are hired.

Discipline. A positive disciplinary climate is directly linked to student learning, and the most effective policies vary according to the targeted behavior. The level of school-

related criminal behavior changed little between 1976 and 1997. No differences in victimization rates were found between White and Black high school seniors in 1997.

Academic organization. Students learn more in schools that emphasize high academic expectations, and expectations have been rising.

To order a print copy of *Monitoring School Quality* by Daniel P. Mayer, John E. Mullens, and Mary T. Moore, call toll-free 877-4ED-PUBS. To download a free PDF version, go to http://nces.ed.gov/pubsearch/index.asp and enter publication number 2001-030.

Raising Private Money for Public Schools

From RAND Education

One result of reforms in school finance and education governance has been the increased need for local schools and districts to raise money from private sources. A recent pilot study sheds light on the types of partnerships and mechanisms schools employ, and presents lessons learned that can help schools overcome challenges as they raise money.

Not surprisingly, researchers found parent involvement to be the most common form of giving at the school level. Beyond parents, local businesses, corporations, and community-based organizations often provide support. Less common are contributions from philanthropic foundations, community members, professional associations, and city governments, though such gifts tend to be significant in size when they do happen.

At the district level, resources often come from larger and more-organized groups—colleges and universities, corporations, and businesses.

At both levels, the most frequently used mechanisms for attracting support are personal contacts and relationship building. These are followed by product sales and special events at the school level, and grant applications and school-business partnerships at the district level.

Socioeconomic status affects private giving, with schools in wealthier communities receiving strong parent support through both monetary and in-kind contributions. Schools in middle- and lower-income communities often appear to receive as much in-kind support, but it comes from a greater variety of givers. As might be expected, poorer communities are more likely to receive funding from corporations and foundations, which may seek to meet the perceived greater needs of these students.

Strategies for Securing Funding

- Maintain continual communication.
- Make it a reciprocal relationship so both parties perceive benefits—especially important with business partners.
- Know your resource base.
- Find ways for donors to "get their feet wet" with modest contributions and they'll often return with larger ones.
- Make it appealing to become involved. Successful schools make everyone feel welcome. A strategy used by some schools was to train community members for volunteer tasks.

Strategies for Overcoming Challenges

- Time is always an issue. At most schools, the principal has greatest responsibility for fund-raising. One school got a grant to pay a community liaison to assist its principal.
- Turnover and mobility of both school and business staff can disrupt good relationships. Try to get more than one person involved on each side to maintain continuity.
- Lack of communication between district and schools may limit schools' ability to effectively find support. One district hosts monthly meetings with principals, PTA presidents, and the local education foundation director.

(continued on page 6)

183

Advice on Building Relationships

Want to learn how to build strategic relationships? Stay abreast of the trends in philanthropy? Learn to practice collaboration?

Articles on these topics and others are available from *Nonprofit Quarterly*. This magazine offers sample issues and articles free on the Web at www.nonprofitquarterly.org.

Research Notes

(continued from page 5)

- Many donors have a short-term support mentality. To help the community understand that the need is ongoing, schools can develop informal verbal "contracts" that specify longer-term commitments.

Private Giving to Public Schools and Districts in Los Angeles County: A Pilot Study by Ron Zimmer, Cathy Krop, Tessa Kaganoff, Karen E. Ross, and Dominic Brewer is available free on the RAND Web site at www.rand.org/publicatons/MR/MR1429. Print copies of the 105-page report cost $15.00 and are available from National Book Network. 800-462-6420.

Community Schools Show Promise

From the Coalition for Community Schools

A new report presents an overview of recent evaluations of community school initiatives and also answers the two most common questions about community schools: *what are they* and *do they work?*

Although community schools can be based on national, state, or local initiatives, and each responds to the unique needs of its students and families, such schools share some characteristics. The Coalition's description of a community school takes the form of a vision statement:

> A community school, operating in a public school building, is open to students, families and the community before, during, and after school, seven days a week, all year long. It is jointly operated through a partnership between the school system and one or more community agencies. Families, youth, principals, teachers and neighborhood residents help design and implement activities that promote high educational achievement and positive youth development. . . . Over time, most community schools consciously integrate activities in several areas to achieve the desired results: quality education; positive youth development; family support; family and community engagement in decision-making; and community development.

In keeping with this vision of community schools as vehicles for education reform, the brief identifies key indicators of academic, social, family, and community improvement. The full report examines information on 49 school-community programs, each of which included anywhere from one to hundreds of schools; the brief provides highlights.

Outcome results include the following:

Learning and Achievement

- 36 of the 49 programs reported academic gains
- 19 programs reported improvements in school attendance and several reported lower drop-out rates

Social Behavior and Healthy Youth Development

- 11 programs reported reductions in rates of substance abuse, teen pregnancy, and disruptive behavior

Family Well-Being

- at least 12 programs reported increases in parent involvement
- many programs with a strong family focus reported improved family functioning

Community Life

- better access to health care, lower hospitalization rates, higher immunization rates, access to dental care, and access to child care were each reported by at least one program
- 6 programs reported lower violence rates and safer streets in their communities

Evaluation of Community Schools: An Early Look by Joy Dryfoos is available in brief or full online at www.communityschools.org/evaluation.html. To obtain a printed copy, contact Coalition for Community Schools, c/o Institute for Educational Leadership, 1001 Connecticut Avenue, NW, Suite 310, Washington, DC 20036. Phone 202-822-8405 or e-mail ccs@iel.org.

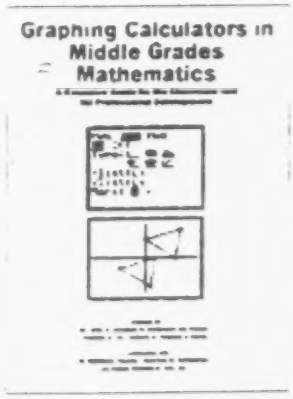
School Improvement Resources from AEL

Graphing Calculators in Middle Grades Mathematics

A Resource Guide for the Classroom and for Professional Development

Written and reviewed by classroom teachers, this resource offers 17 lessons that focus on key middle grades mathematics concepts. It includes teachers' notes and reproducible student handouts with detailed instructions.

The teachers' notes for each lesson provide an outline, answers to the student activities, discussion points, suggestions for written and/or performance-based assessment, and ideas for adaptations and extensions. Also included are keystrokes and related calculator screens for four calculators: TI-73, TI-83 Plus, Casio FX-7400G Plus, and Casio CFX-9850GB Plus.



The lessons are aligned with national standards for mathematics, and designed to actively engage middle grades students. To connect mathematics to the real world and to other disciplines, calculator-enhanced activities are blended with a variety of instructional strategies.

One lesson, for example, connects mathematics and science; another uses a sports context to help develop and reinforce statistical concepts. A number of the lessons make connections between mathematics topics; for example, more than one lesson connects geometric and algebraic concepts. Most lessons contain paper-and-pencil activities as well as calculator exercises aimed at encouraging students to explore and discover concepts in problem-solving contexts.

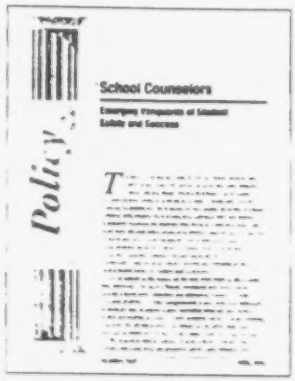
The lessons can be used for professional development in two ways: (1) to model appropriate integration of the graphing calculator and (2) to familiarize participants with calculator keystrokes. The activities can also be used to assess the effects of classroom use of graphing calculators on student learning.

This online resource was developed by the Center of Excellence for Science and Mathematics Education at the University of Tennessee at Martin in collaboration with the Eisenhower Regional Consortium for Mathematics and Science Education at AEL.

School Counselors

Emerging Vanguards of Student Safety and Success

Parents, schools, and policymakers share two major concerns for children: to learn and to be safe at school. Public concern about violence in schools has increased pressure on policymakers to do more to make schools safe, orderly learning environments. In response to high-profile incidents of school violence, policymakers have passed zero tolerance laws that impose mandatory expulsion for students who bring weapons to school, and many have adopted other measure to protect students. The tragic proportions of school violence we've seen in recent years brings our attention to a crucial, but often overlooked, component of violence prevention: attending to the mental health needs of children and adolescents.



By helping troubled students address their problems, effective school counseling programs promote school safety. However, few realize their potential to boost school achievement as well. By helping students build needed skills and overcome barriers to learning and healthy development, school counselors can play a central role in achieving the dual goals of school safety and school improvement.

This policy brief discusses the critical role school counselors can play in achieving the dual goals of school safety and school improvement by addressing barriers to learning and healthy development of students. The brief presents information on effective practices for school counseling programs, the role of the school counselor, and actions that policymakers can take to support school counseling programs.

An extensive reference list is included. This issue of *Policy Briefs* was researched and written by Soleil Gregg, AEL staff, and Janice Kuhl, Supervisor, Counseling, Des Moines Public Schools, Iowa.

BEST COPY AVAILABLE

See inside for ordering information.

Resources Available from AEL

Some documents can be downloaded free at www.ael.org. Look for this symbol: (W)

___ **A Guide to Gender Fair Education in Science and Mathematics (1998)** (W)

This publication presents information gathered from hundreds of teachers and researchers in the field of education equity. Highlighted are examples of programs supported by the U.S. Department of Education and National Science Foundation, as well as states, counties, and cities. It includes an annotated bibliography. $15; 40 pp.

___ **A Teacher's Guide to Project-Based Learning (2000)**

Introduces the ideas and methods that underpin project-based learning. Includes profiles for 13 types of projects, a step-by-step planning guide, an annotated list of references, and more. $16; 98 pp.

At a Glance: ADHD and IDEA 1997 (2000) (W)

This issue of *Policy Briefs* offers an overview of federal requirements as well as information specific to the AEL region. It and the monograph from which it was excerpted, *ADHD and School Law*, are available only on our Web site. Free. www.ael.org/rel/policy/adhd2000.htm.

___ **Briefs for Parents (1999)** (W)

These sets of six articles are ready to cut and paste into your newsletter, newspaper, or periodical. Each addresses a child development or education topic of concern to parents. They are available free (limit one copy of each set per order). Check the set(s) you wish to receive.

___ Brief articles for a general audience of parents (English only)

___ Spanish language brief articles for parents (with English translations) 1999 edition. www.ael.org/eric/parents.htm.

___ **Creating Safe Rural Schools (1999)**

In this videotape, educators who have designed and implemented safety programs at the state, district, and school levels suggest ways to create safe rural school settings. $15; 58 minutes.

Curriculum Creator (2000)

A Web-based tool that helps teachers and administrators create and align curriculum to standards, collaborate and share materials, and map semester and/or yearly lesson plans. One-time set-up fee and annual subscription prices are based on school enrollment. For information, call 800-624-9120 or visit www.ael.org/curriculumcreator.

___ **Curriculum Snapshots (2000)** (W)

This publication provides glimpses into the classrooms of real teachers to illustrate appropriate and creative uses of technology at all grade levels and within different subject areas. $10; 108 pp. Access to the companion Web site (www.ael.org/snapshot) and downloadable documents is free. The Web site offers a searchable database of lesson ideas and information on how to submit your own.

___ **Dissolving the Boundaries: Planning for Curriculum Integration in Middle and Secondary Schools (1998 revision)**

This publication helps secondary school faculties prepare for curriculum integration through a four-step process. The recent revision integrates technology use into the curriculum units. Book with 78-page facilitator's guide, $31; single or additional copies of book, $16; 83 pp.

___ **Distance-Based and Distributed Learning (2000)**

As more school districts and education institutions explore distance-based learning, they need to know what to think about as they design or acquire courses. This easy-to-use decision tree can help. $2.

Educational Software Use: The 2000 Report (2000) (W)

This survey of teachers in the region looked at technology training, beliefs about the importance of software use, barriers to software use in the classroom, software selection practices, and more. Go to www.ael.org/rtec/survey.htm.

___ **Elementary Change: Moving Toward Systemic Reform in Rural Kentucky (2000)**

This book captures the results of AEL's 10-year, qualitative study of systemic school reform in four rural Kentucky districts. It presents findings and recommendations to help educators and policymakers keep KERA on track. $20; 244 pp. (ISBN 1-891677-09-8)

___ **Family Connections Early Start (2001)**

This series of 10 four-page briefs contains useful information in an easy-to-read format. Designed for families with children ages zero to three, the full-color briefs address such topics as nutrition, first toys, language development, and more. Sample set of 10 briefs: $3. Package of 20 sets (10 briefs per set): $24.95.

___ **Family Connections Parent Notebook (1998)**

The *Family Connections* learning guides are now in a notebook for parents and available in three volumes: *Family Connections 1* is for families of preschool children, *Relaciones Familiares 1* is the Spanish-language version, and *Family Connections 2* is for parents with kindergarten children. Each notebook contains a set of 30 four-page guides, plus tips for using them. $14.95 each ($11.95 without 3-ring binder).

___ **Graphing Calculators in Mathematics Grades 7-12 (1998)** (W)

This resource guide offers lessons covering a wide variety of mathematical concepts and topics. Planned for teachers with no experience with graphing calculators and for those who have used the instruments since inception, these lessons emphasize hands-on problem-solving approaches, with connections to science and the real world. $39; 250 pp. www.ael.org/calculators.

Graphing Calculators in Middle Grades Mathematics (2001) (W)

Written and reviewed by classroom teachers, this resource offers 17 lessons that focus on the development of key middle grades mathematics concepts. It includes teachers' notes and reproducible student handouts with detailed instructions. Print version not available; download free PDF version at: www.adobe.com/products/acrobat/readstep.html

___ **Improving Rural School Facilities: Design, Construction, Finance, and Public Support (2000)**

While the condition of rural school facilities varies across the country, most rural school districts face similar issues. In this book, editors Sarah Dewees and Patricia Cahape Hammer present discussions of these issues from several perspectives. $18; 132 pp. (ISBN 1-891677-05-5)

___ **In Accord with Nature (1999)**

This book demonstrates how educators and youth leaders can help middle and high school students understand and define their relationship to nature. Alternative teaching strategies and structured activities connect students with the natural and the built worlds. $19; 192 pp. (ISBN 1-880785-20-X)

___ **Inside School Improvement: Creating High-Performing Learning Communities (2000)**

Researchers, teachers, principals, parents, and students collaborated on this book. Their stories, reflections, and discussions of theory provide inspiration as well as food for thought and dialogue. Included are

practical tools, activities, and resources to use right away. $35; 328 pp. (ISBN 1-891677-10-1)

___ Making Resources Matter: A Systematic Approach to Developing the Local Consolidated Plan (2000)

This series guides school districts as they develop a consolidated plan for programs and resources. The 10 modules address all components of the planning process and offer sugestions for developing a plan to use resources effectively. Boxed set: $25.

___ Next Steps: Research and Practice to Advance Indian Education (1999)

Editors asked a dozen indigenous scholars and practitioners to help answer such questions as What is "Indian education" today? and How will it look in the future? The essays they received help readers explore the issues that face educators who work with indigenous students. $28; 317 pp. (ISBN 1-880785-21-8)

___ Notes from the Field: Evolution of the Primary Program in Six Kentucky Schools. Vol. 6, No. 1 (1998) (W)

In this issue, researchers examine the development of the primary program in six rural Kentucky elementary schools. The most detailed description comes from 1996-97, when researchers narrowed the focus of their work to the class of 2006. $2; 12 pp. plus 8-page supplement. www.ael.org/pnp/notes.

Notes from the Field: KERA in the Classroom. Vol. 7, No. 1 (2000) (W)

In this issue, researchers present findings and recommendations based on analysis of data gathered during AEL's 10-year study of four school districts. www.ael.org/rel/policy/note2000.htm.

___ Patterns of Promise (2000)

This book describes exemplary uses of technology at 12 schools. Large and small, well-to-do and low income, urban and rural—these schools all take creative and innovative approaches to using technology and finding funding. $15; 116 pp. (ISBN 1-891677-07-1)

___ Principal Connections (2000)

This CD-ROM can help school leaders examine their roles as technology leaders, identify barriers to technology integration, learn strategies to help teachers accept technology, and more. $10. The companion Web site supplements and updates the CD-ROM and links to sites of interest to technology leaders (www.principalconnections.org).

___ Reaching Out: Best Practices for Educating Mexican-Origin Children and Youth (1999)

Harriet Romo of the University of Texas at Austin describes successful approaches to improving outcomes for this growing population of U.S. students. $24; 232 pp. (ISBN 1-880785-22-6)

___ Recruiting and Training Volunteer Tutors of Emergent and Beginning Readers (1998)

This manual identifies characteristics of effective tutoring programs; suggests ways to recruit tutors and select the students they'll work with; presents a model for conducting tutor training sessions; and provides activities tutors can use to help readers with comprehension, word study, and writing activities.

___ Trainer's package (90-minute video, 64-page manual, and 15 activity cards). $225.

___ Tutor's package (64-page manual and 15 activity cards). $30.

___ Rural School Administrators' Resource Kit (2001) (W)

The kit includes the *2001 Rural Education Directory: Organizations and Resources*. It also contains the following tools: (1) Assessing Parent Involvement: A Checklist, (2) Community Asset Mapping, (3) Community Engagement: An Inventory, (4) Creating Safer Rural Schools: Involving the Community, and (5) Rural School Facilities Planning Process. The directory is free online at www.ael.org/eric/ruraled. The tools are at www.ael.org/rel/rural/abstract/toolkit.htm. Print copy: $20, approx. 90 pp.

___ School-Based Programs to Promote Safety and Civility (W) **(1998)**

This issue of *Policy Briefs* focuses on more than 20 primary and secondary level antiviolence programs, all of which get a thumbs-up from researchers. Complete contact information is provided for each program. $2; 12 pp. www.ael.org/rel/policy/schbas.htm.

___ School Counselors: Emerging Vanguards of School Safety and Success (2000) (W)

The policy brief discusses the critical role that school counselors can play in achieving the dual goals of school safety and school improvement by addressing barriers to learning and healthy development of students. The brief presents information on effective practices for school counseling programs, the role of the school counselor, and actions that policymakers can take to support school counseling programs. ($2, 8 pp.)

___ Schools for Disruptive Students: A Questionable Alternative? (1999) (W)

Recent legislation and commitments to provide safe learning environments have prompted states to create alternative schools for disruptive students. This issue of *Policy Briefs* reviews research and suggests indicators for judging the effectiveness of alternative school legislation. $2; 8 pp. www.ael.org/rel/policy/disrstd.htm.

___ Small High Schools that Flourish: Rural Context, Case Studies, and Resources (2000)

This book discusses small rural high schools in the United States and why we should care about them. It then takes a closer look at four particular schools located in communities of very modest means. Edited by Craig B. Howley and Hobart L. Harmon. $20; 200 pp. (ISBN 1-891677-06-3)

___ Standards Implementation Indicators: Charting Your Course to High Achievement (2000)

An easy-to-use tool to help school leaders look at their progress toward standards-based instruction. Includes six indicators, a profile chart, and a planning form. $14.95.

___ The ABC's of Parent Involvement (1998)

This book offers information, inspiration, ideas, and expert advice to parents with children of all ages. AEL's Family Connections staff contributed early childhood knowledge. 134 pp. Single copies are $3, and a box of 50 costs $70 east of the Mississippi or $75 west of the Mississippi, shipping included.

___ UnCommon Knowledge: "The Voices of Girls" Documentary (2000)

Girls from one of the poorest rural counties in the United States surprised their families, teachers, and even themselves on a three-year exploration of the science and mathematics of everyday life. See the powerful impact of the Voices of Girls project, funded by the National Science Foundation and operated by AEL. Videotape, $15; 57 minutes.

UnCommon Knowledge: Guides for Hands-on Science and Math (2000) (W)

Volume One includes activities on the science of folk medicine and natural dyes, the science of nutrition, and the science of food preservation. Volume Two contains the mathematics of quilting and making art through mathematics. The guides are free and available only from the ERIC pages of AEL's Web site at www.ael.org/eric/voices.

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188

AEL Order Form

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Connecting Through Technology

(continued from page 2)

was used four evenings a week to provide adult education to residents. Senior citizens comprised a large percentage of the students. Participation logs from October 2000 to February 2001 provided a snapshot of van activities at 10 community events: Visitors included 2,900 students, 300 parents, 220 teachers, 10 administrators, and 2 school board members.

Richland Clicks! received strong support from parents and the business community. Volunteers took part through arrangements that linked students with business leaders.

Your Future in West Virginia. . .Growing Together

Monongalia County, West Virginia
www.phase9.org

After many coal mines closed, the West Virginia High Technology Consortium wanted to bring new economic development to the state. Community members did not always see schools as resources, nor did they imagine the economic benefits technology might bring. Your Future in West Virginia opened doors by establishing 21 Technology Opportunity Centers (TOCs). During the school day these computer centers served students; in the evenings TOCs provided training for displaced workers, community businesses, and parents, and awarded certification for proficiency in computer and multimedia technologies.

Reality Based Learning

Kirby, Illinois
www.d348.wabash.k12.il.us/rbl/main.htm

A seventh-grade class raised local awareness of the United Way by preparing a community awareness campaign. Products included tray liners for Taco Bell, magnets, fliers, and a Web page. The students were engaged in Reality Based Learning (RBL), a variation on problem-based learning. RBL fused connections between the community and the schools, making schools more visible and community members more involved. Mutually beneficial partnerships created better communication and greater awareness of school programs in general. Students got a strong dose of reality through preparing actual products to resolve community problems.

Teaching & Learning with Technology: Bridging Schools & Home with Technology

Lawrence, Massachusetts
www.vcni.com/lpschools/gate.htm

The Lawrence Public Schools chose to strengthen the link between school and home by providing technology-supported tools and training to teachers and parents. Undaunted by the recent influx of immigrant families—whose primary language often was not English—Lawrence successfully employed technology to build supportive partnerships to increase access and technology skills throughout the community.

The program partners included schools beyond Lawrence, which provided expertise and support for the endeavor. The Northern Essex Community College first got involved by providing a four-week summer program for students in grades 3 through 8. The "College Academy" focused on building technology skills and providing enrichment activities. Its success led to developing more activities for students and their families, and using the campus after school, on weekends, and in the summer.

The Seton Asian Center provided access to technology for large segments of the community and showed the value of building partnerships that reflect the community. Other partners included the Lawrence Public Library and the Merrimack Valley Regional Employment Board.

Involving Parents in Secondary Schools

A new bulletin from the National Association of Secondary School Principals (NASSP) includes a special section on parent involvement.

One article offers suggestions for inviting parent involvement and collaborating with the community.

"Recruiting and Using Volunteers in Meaningful Ways in Secondary Schools" by Mary Ann Burke is available online at www.nassp.org/news/bltn_rcrt_vlntrs1001.html.

Grant Opportunities

Find more grant opportunities at www.schoolgrants.org. Consider also watching the Federal Register, published every weekday, at www.access.gpo.gov/su_docs/fedreg/frcont01.html.

The Educational Foundation of America

The Foundation makes awards to eligible nonprofits primarily in the areas of the environment, population control and reproductive freedom, Native Americans, arts, education, medicine, and human services.

Find information at www.efaw.org/lett.htm

Federal Programs

U.S. Department of Energy: Albert Einstein Distinguished Educator Fellowships

Purpose: To support the intellectual and professional development of teachers who desire to contribute their expertise and be involved in the advancement of science, math, and technology education.

This program for distinguished mathematics and science teachers involves teachers in the work of government agencies or congressional offices. Appointments last 10 months and usually begin in September and end in June. Fellows earn a stipend of $5,000 a month plus moving expenses.

Deadline: February 1, 2002

Information and application available online at www.scied.science.doe.gov/scied/Einstein/about.htm, or contact Todd Clark by phone at 202-586-7174 or by e-mail at todd.clark@science.doe.gov.

ARC: Appalachian Youth Entrepreneurship Education Springboard Awards

Purpose: To recognize best practices, gain public attention, develop advocates, and provide support for youth entrepreneurship educaton programs.

This program is jointly sponsored by the Appalachian Regional Commission, the U.S. Department of Education, and the National Commission for Entrepreneurship. It is based on the understanding that youth education programs often serve as "springboards" for launching businesses that create jobs and diversify and strengthen the regional economy. Six awards of $2,000 each will be made.

Deadline: January 23, 2002

Application information available online at www.arc.gov/programs/reginit/spring.htm or from Deann Reed at 202-884-7786, e-mail dreed@arc.gov.

190

Foundations

Dunn Foundation: Visual Environmental Education

Purpose: To support programs that reconnect youth with their physical surroundings, heighten their awareness of visual pollution, and reinforce the civic values vital to healthy communities.

Programs should be consistent with the overall goals of the foundation, and reinforce the activities in *ViewFinders Too*, the foundation's curriculum. Projects funded under this competition will have a national, statewide, or regional scope, and be suitable for replication.

Deadline: Pre-application letters must be submitted by January 15, 2002. Formal applications will be invited.

Information and application available online at www.dunnfoundation.org/grants2.htm, by phone at 401-941-3009, or by e-mail to dunnfndn@tiac.net.

NEA Foundation for the Improvement of Education: Innovation Grants

Purpose: To support development and implementation of innovative ideas that result in high student achievement.

Proposals should involve two or more public school teachers, education support professionals, and/or higher education faculty. Up to 200 grants per year ($2,000 each) will be awarded. To further promote collegiality, teams will be expected to designate a "critical friend" to provide objective feedback and reflection.

Deadline: March 15, 2002

Information and application available at www.nfie.org/programs/innovation_guidelines.htm.

The Random Acts of Kindness Foundation: Lesson Plan Contest

Purpose: To promote kindness in schools.

The foundation collects lesson plans for kindness projects or activities and makes them available at no charge. The 10 best

lesson plans will earn $500 prizes for their creators and will be recognized on the Web site and in a newsletter.
Deadline: March 31, 2002
Information and application available online at www.actsofkindness.org/whats_new/lesson_plan_contest.html or by mail from The Random Acts of Kindness Foundation, c/o Lesson Plan Contest, 1801 Broadway, Suite 250, Denver, CO 80202.

Folgers and the GRAMMY Foundation: Waking Up the Music

Purpose: To wake up the full potential in every child through benefiting elementary school music education.

Elementary schools register online, send in a survey, and receive a free curriculum kit. It includes world-beat rhythm instruments, a CD that features relevant musicians, a book that tells the musician's story, lessons and background information, and an instructional guide for teachers.

The top 10 participating schools, based on factors such as excellence in musical education, breadth of students reached, and innovation in teaching, will each receive a $2,500 cash grant.
Deadline: Open
Information and registration available online at www.folgers.com/grammys/index.html.

Other

Craftsman/National Science Teachers Association: Young Inventors Awards

Purpose: To challenge students to use creativity and imagination along with science, technology, and mechanical ability to invent or modify a tool.

Open to students in grades 2 to 8, with guidance from a teacher, parent, or significant adult. Each entrant must work independently to conceive and design a tool that performs a practical function—it can mend, make life easier or safer, entertain, or solve an everyday problem.

Two national winners (one each from grades 2-5 and grades 6-8) will receive $10,000 savings bonds. Ten national finalists will receive $5,000 savings bonds. Second- and third-place winners will receive savings bonds, and all entrants will receive certificates and small gifts.
Deadline: March 14, 2002
Information and application available online at www.nsta.org/programs/craftsman; by e-mail at younginventors@nsta.org; by phone at 888-494-4994; or by mail to Young Inventors Awards, National Science Teachers Association, 1840 Wilson Blvd., Arlington, VA 22201-3000.

Toshiba/National Science Teachers Association: ExploraVision Awards

Purpose: To foster student creativity and teamwork, inspire an Internet presence in science, and help students develop a belief that they can make a difference through science. ExploraVision helps students discover science and technology while applying skills in other disciplines.

Participating in teams and guided by a teacher coach, students select a current technology and explore it. After imagining what that technology could be like 20 years in the future, students ground their creative ideas using real science.

In the first phase, a committee will select 24 projects, one from each of four grade-level categories in six regions. Each team will design a Web page showcasing its technology, and judges will choose eight national finalist teams. Finalists will win a trip to Washington, DC, for the gala awards weekend. Students from the four first-place teams will each receive $10,000 savings bonds, and second-place winners will receive $5,000 savings bonds.
Deadline: February 4, 2002
Information and entry kit available online at www.toshiba.com/tai/exploravision; e-mail exploravision@nsta.org; call 800-EXPLOR9.

Get Your E-rate

The E-rate discount program provides public and private (nonprofit) schools and libraries with access to affordable telecommunications services.

To learn about the application process, visit the Universal Service Administrative Company Web site for a step-by-step guide (www.sl.universalservice.org/apply). Plan ahead—the first form you file (Form 470) must be posted for at least 28 days before the actual application (Form 471) can be filed.

The application window closes January 17, 2002. Discounts are for July 1, 2002, to June 30, 2003.

Publications of Interest

"Powerful Learning with Public Purpose"

That's the banner of the What Kids Can Do (WKCD) Web site. The home page explains that the site provides "compelling examples of young people working with adults in their schools and communities on the real-world issues that concern them most."

The new nonprofit organization's mission includes connecting the fields of school reform, youth development, community development, service learning, and school-to-work.

The WKCD site offers stories by and about young people and teachers, and other materials of interest to parents and educators. Find it at www.whatkidscando.org.

NASA Images Bring Universe to Classrooms

Bring the giant planet Jupiter and its moons into the classroom. Explore the peaks and valleys of the ocean floor without getting wet. Travel to distant galaxies and back in one class period.

Nearly 100 images—from Buzz Aldrin taking a walk on the moon to colliding galaxies to the volcano of Mt. Etna, Italy—are available at NASA's educational Web site The Space Place (spaceplace.nasa.gov) for classroom use. The pictures help bring a number of topics alive, including the solar system, weather, geology, and geography.

Find "Goodies for Teachers" through the schoolhouse icon on the home page. There, teachers can choose Earth- and space-related printable pictures in several categories. The Space Place includes images and curriculum for use in the classroom, as well as discovery-based learning activities for students to do on their own.

A Virtual Backpack for Parents

Parent involvement today means much more than just bake sales, classroom monitoring, and helping with homework. "Parent involvement in the school does make a difference and good principals welcome it," says Christopher T. Cross, president of the Council for Basic Education (CBE). "In assuring a quality education and supporting the school, parents need to be informed and ask questions."

CBE has filled a virtual backpack with information that will enable parents to stay actively involved in their children's learning. A checklist helps parents evaluate a school's quality and its focus on student learning, a framework helps them understand and support good reading instruction, and a guide to accountability helps parents develop relationships with teachers and become informed about school issues. Find the CBE Virtual Backpack at www.c-b-e.org/news/nr010831.htm.

ERICNews Available Online

The Educational Resources Information Center's electronic newsletter is now available on the ERIC Web site. Of interest to librarians, teachers, school administrators, and the general public, *ERICNews* provides resources concerning all topics in education research—disabilities, urban and rural schools, higher education, and much more.

Updated the first of each month, *ERICNews* contains three sections: GrapeVine, providing general news about ERIC; WebWorld, with ERIC Web site updates; and BookMarks, which lists ERIC's new print publications.

View the current issue of *ERICNews* at www.eric.ed.gov/about/ericnews/tococt01.html.

New Look for www.ed.gov

The U.S. Department of Education recently redesigned its Web site. Organization and functions have been improved, and users may now personalize the site. According to Secretary of Education Rod Paige, "This redesigned site can help reduce the time teachers, parents, and others spend looking for information so they can spend more time using it to help children learn."

A team from the Department's information office spent more than a year working on the new design, and invites comments and feedback from users to contribute to refinements. Improvements and new features include these:

- information can be reached through multiple paths, including grants and contracts, financial aid for students,

research and statistics, and education resources
- an improved search function will produce more relevant and reliable results
- customized pages have been created for teachers, principals, parents, students, and other groups

The ED Web site is consistently among the most-visited government sites, averaging more than 1 million visitors each month. A study of government Web sites, released in September by Brown University, ranked it sixth in quality among 58 federal sites.

Including English Language Learners in Assessments

A recent policy brief from the National Center for Research on Evaluation, Standards, and Student Testing (CRESST) addresses issues and recommendations for including English language learners (ELLs) in large-scale assessments.

While federal and state legislation now require inclusion of all students, some specific accountability policy challenges exist. These include differences among states on inclusion/exclusion policies, type and use of accommodations, and reporting. In addition, national norm-referenced standardized tests may have been normed using native English speakers, a factor that can affect accuracy of results in states with large ELL populations.

According to CRESST research, even translating test items from English to a student's native language does not significantly improve ELL performance when the language of instruction is not the student's native language. Researchers found the only accommodation that narrowed the gap between ELL and non-ELL students was linguistic modification of test questions having excessive language demands.

CRESST recommendations to policymakers and educators include matching the language of assessment to the student's primary language of instruction, modifying test questions to reduce unnecessary language complexity, and monitoring and evaluating the intended and unintended effects of accommodations.

Policy Brief 4, Assessment and Accommodations for English Language Learners is available online at www.cse.ucla.edu or by contacting Kim Hurst at CRESST/UCLA, GSE&IS Building, Mailbox 951522, Los Angeles, CA 90095-1522.

Consult the Knowledge Loom

The Knowledge Loom's spotlight on Good Models of Teaching with Technology launched recently at http://knowledgeloom.org (see highlights in box below).

The Knowledge Loom provides access to best practices, success stories, policy links, and interactive tools to get conversations going in schools and districts. The tool assists ongoing, job-embedded professional development and planning school improvement initiatives.

At the Knowledge Loom, users can
- view practices, stories, and strategies
- add stories, questions, bits of wisdom
- participate in online panel discussions with other educators
- discover supporting organizations and resources

The Knowledge Loom's interactive tools encourage users to react to content, share knowledge, and contribute their own useful experiences. Register to gain access to all interactive features. (Read-only access is always available to unregistered users.)

This Web-based resource is managed by the Northeast & Islands Regional Educational Laboratory at Brown University. It offers collections of proven K-12 best-practice resources. The work of nationally recognized technical assistance organizations, researchers, and outstanding schools and districts is featured.

Highlights: Good Models of Teaching with Technology

This new spotlight area presents a set of recognized best practices that support the effective integration of technology into the curriculum. Start with three essential elements:

- Standards. All technology-enhanced activities should be deliberately and consciously aligned with local, state, and national standards.
- Assessment. Each learning activity should be accompanied with well-defined indicators of success.
- Accessibility. Technology must be readily accessible in a way that meets the needs of all learners.

The fourth element presents

- Multiple learning strategies. A variety of strategies should include active learning, constructive learning, authentic learning, cooperative learning, and intentional/reflective learning.

Save these dates!

Transforming Middle Schools: Focus on Instruction, Grades 5-9

June 28-28, 2002 • Charleston, West Virginia
An institute sponsored by AEL and the University of Charleston

"The middle school years have so much to do with opening doors to the future. We want to make a difference for students by helping middle school educators find a new excitement about teaching through effective strategies for the classroom and for school leadership."

That mission, declared Sandra Angius of AEL and Jo Blackwood of the University of Charleston, permeates the planning for the partnership's first venture.

"During the five days, school teams will develop and share projects to use with students. We'll use topics that should grab students' interests, such as *Designing a city for the future* or *Exploring the meaning of active citizenship.*"

This rich professional development experience will guide the integration of literacy, technology, and project-based learning into the curriculum. Teachers, principals, and district curriculum supervisors are encouraged to attend as members of school-based teams.

Registration fee will be $325 per person. (Deduct $25 per person for a team of three or more.) Fee covers workshops, materials, lunches, and refreshment breaks.

To find out more, contact AEL's Terry Foster at 800-624-9120 or 304-347-0449; or Jo Blackwood, University of Charleston, at 304-357-4707. Watch the Web for more information: www.ael.org and www.ucwv.edu.

Graduate, professional development, and/or recertification credits will be offered.

AEL is a private, nonprofit corporation. AEL serves as the regional educational laboratory for Kentucky, Tennessee, Virginia, and West Virginia. For these same four states, it operates the Eisenhower Regional Consortium for Mathematics and Science Education. In addition, it serves as the Region IV Comprehensive Center and operates the ERIC Clearinghouse on Rural Education and Small Schools. AEL houses the Institute for the Advancement of Emerging Technologies in Education (IAETE) and the Alliance for Excellence in Learning, a subsidiary corporation. AEL's primary source of funding is the Office of Educational Research and Improvement (OERI), U.S. Department of Education. This publication is produced with funds from OERI contract number ED-01-CO-0016. The contents herein do not necessarily reflect AEL or OERI policies or views.

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